DOCUMENT RESUME

ED 090 738 EC 061 843

TITLE	Mobile Unit to Provide Vocational Evaluation for Handicapped Children. Final Report.
INSTITUTION	Baltimore County Board of Education, Towson, Md.
SPONS AGENCY	Social and Rehabilitation Service (DHEW), Washington, D.C. Div. of Research and Demonstration Grants.
BUREAU NO	RD-3225
PUB DATE	73
NOTE	131p.
EDRS PRICE	MF-$0.75 HC-$6.60 PLUS POSTAGE
DESCRIPTORS	Aptitude Tests; Curriculum; *Educable Mentally Handicapped; *Exceptional Child Education; Mentally Handicapped; *Mobile Classrooms; *Program Evaluation; Vocational Aptitude; Vocational Education; Vocational Interests
IDENTIFIERS	Baltimore; *Vocational Evaluation

ABSTRACT

Presented is the final report of a 3-year project (1970-73) to provide vocational evaluation in a mobile unit for the 330 intellectually limited students in grade 10 special classes in the Baltimore County schools. Main project aims are given to be evaluation at home schools and subsequent development of recommendations for using school and community resources to help students attain economic independence. The literature on vocational improvement is reviewed, and investigations of mobile units are summarized. Described are the county, school system, special curriculum students, and community services. Service delivery by the mobile unit is seen to have included aspects such as unit design and preparation for arrival at schools. Explained is the evaluation system which involved sequential exploration of the student's history, level of functioning, and career potential through psychometric tests and work samples on five Tower system tasks (clerical work, electronics assembly, mail clerking, sewing, and workshop assembly). Among findings reported are significantly consistent, uniform, and standardized assessment in the mobile unit; improvement in student self concept due to individual appraisal of potential combined with recommendations; parents' approval of the evaluation; and extension of the evaluation to include all types of students. (Given in appendixes that consist of almost half the document are descriptions of program components, a profile of student characteristics, and representative evaluation forms.) (MC)

ED 090738

FINAL REPORT PROJECT RD-3225 GF

MOBILE UNIT TO PROVIDE VOCATIONAL EVALUATION FOR HANDICAPPED CHILDREN

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Board of Education of Baltimore County
Towson, Maryland
1973

EC 061 943

This investigation was supported, in part by Demonstration Grant No. RD - 3225 G F from the Division of Research and Demonstration Grants, Social and Rehabilitation Service, Department of Health, Education, and Welfare, Washington, D. C. 20201.

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Message from the Superintendent

The Board of Education of Baltimore County has consistently recognized the fundamental role of curriculum in the development of a quality school system. What children learn and how they learn it are the primary responsibilities of the schools.

Baltimore County has had a long tradition of curriculum development by teachers and staff members. The expertise which has evolved has earned this school system national recognition for its curriculum and has provided an educational program of excellence for its children. Significant trends in education as well as special needs within Baltimore County have been incorporated into the curriculum designs.

The project, Mobile Unit to Provide Vocational Evaluation for Handicapped Students, offered input and direction for curriculum planning. The implementation of the results of the project reflect an increased emphasis on individualization, human relationships, options, and new processes for depth in comprehension and continuing understanding.

Baltimore County has long offered a program for students with special needs. As improved diagnostic techniques and teaching technologies became available, the thrust of the program is directed more towards satisfying the individual needs of the student. With the introduction of a service of vocational evaluation, the professional staff has available a resource that can be of limitless importance when establishing instructional programs and goals for each student.

We anticipate that the quality of this project and its implementation within the curriculum will improve the quality of life of the students for whom it has been prepared.

Towson, Maryland
June, 1973

Joshua R. Wheeler
Superintendent

FOREWORD

The course of public education is moving today from the traditional approaches to one of dynamic encounters between student and subject matter. The concept of career education is rapidly gaining acceptance throughout the country; the integration of this concept within the curriculum has exciting implications and offers great hope for those students who are unable to benefit from the traditional classroom approach.

As public education expands both in numbers of students and in technological proficiency, new methods of reaching students must be found. Today's student is not a passive individual. He wants to be involved; he wants to question and challenge and he wants to be himself. As an individual, he has certain needs, interests, abilities, and aptitudes that must be satisfied. It is this identification of individual characteristics that is the concern of vocational evaluation.

Once a student's individual characteristics have been determined, a personalized program of learning experiences can be planned to help him achieve a predetermined goal. An individualized approach which incorporates assessment, educational programming, supportive services, and follow up allows the student maximum latitude to achieve self-actualization.

The project, "A Mobile Unit to Provide Vocational Evaluation of Handicapped Students", attempted to satisfy the urgent need for this type of program. The mobility of the service, a unique feature of the project, is worthy of considerable comment. Mobility provided a consistent, uniform, and standardized assessment of a specific population group. The results of

the vocational evaluation offered direction for curriculum planning and for inservice training for teachers. They also had considerable impact upon other areas of educational planning.

The impact of this project will be felt for many years to come, since the data gathered, although tentative, suggest many options and offer specific direction for making education more meaningful and relevant to each individual student.

PREFACE

The need to assess the vocational assets of handicapped students was recognized long before the technology existed with which to do the job. The social acceptance of the intellectually limited student within the educational setting and the subsequent emphasis on employment of the mentally limited that developed during the 1960's required the creation of a means of assessing their individual abilities, aptitudes, and interests for employment.

The Maryland State Department of Education, Division of Vocational Rehabilitation, entered into cooperative agreements with several local boards of education, including the Board of Education of Baltimore County. These cooperative agreements opened new vistas for professional assistance to students by making available ancillary services not usually provided by the school system. At the same time, the service of vocational evaluation became available to clients of the Division of Vocational Rehabilitation. Based upon the TOWER System of vocational evaluation, the Baltimore League for Crippled Children and Adults offered vocational evaluation services to those in the community who might benefit from an assessment of their vocational potential.

The experience of the counselor from the Division of Vocational Rehabilitation in trying to place an intellectually limited student into employment resulted in a hit or miss proposition. Quite often the counselors did not have sufficient experience in working with this handicapping condition; the test data in the school was inadequate and incomplete; and frequently

the student did not participate in school activities to the same degree as his non-handicapped counterpart, so that an appraisal of potential was not possible. More often than not, the student's family was unrealistic in their vocational aspirations for their child.

The ever-increasing volume of the special classes, the demands placed upon the counselor from the Division of Vocational Rehabilitation, and the lack of reliable data prompted a search for a service to fulfill these needs. As a result of this search, a group of students were vocationally evaluated at the Baltimore League for Crippled Children and Adults.

The initial attempt to offer vocational evaluation to the intellectually limited students from the Baltimore County schools met with success. The students were aware of their vocational potential and the parent could think and hope in positive terms when considering the future of their child. The vocational evaluation report had the potential to provide school personnel with a wealth of objective data on the student so that efforts might be directed toward helping the child become independent. Through vocational evaluation, the D. V. R. counselor and the job development coordinator could obtain special information about career potential and work behavior of each student. They could use this information when considering services for the student.

Although the concept of vocational evaluation was now accepted, there were several drawbacks in the mechanics of serving a specific population group, such as the entire twelfth grade of intellectually limited students. The Baltimore League for Crippled Children and Adults attempted to serve all clients, not just students, and scheduling became a problem. Transportation also posed a problem, since the students to be evaluated were met at their

home school by a taxicab, transported to the Baltimore League, and returned to the school in time to meet the bus for the trip home. Because the Baltimore League is centrally located in Baltimore City and senior high schools are scattered throughout Baltimore County, a ride each way of one hour was average. This left three to four hours daily for vocational evaluation. The duration of the evaluation was from three to four weeks, and this extended period of time away from the routine school activities posed some problems for the students. Some schools at the extreme distances from the Baltimore League were unable to send their students for the vocational evaluation.

During the several years that the Baltimore League provided vocational evaluation to students from the special classes of the Baltimore County public schools, several factors became apparent:

1. The concept of vocational evaluation was sound.
2. The vocational evaluation being performed prior to the 12th grade could offer significant curriculum contributions.
3. The Board of Education of Baltimore County should attempt to seek a means of making vocational evaluation available to students.
4. Services offered to students would increase due the objective analysis of vocational evaluation and the direction the report offered to the professional community.
5. New vistas for cooperation among community agencies and within the Board of Education of Baltimore County would occur as a direct consequence of the type of recommendations emanating from the vocational evaluation process.
6. An involvement with the parent would be possible whereby their support and help would be encouraged in the total education program.

With an established set of objectives, a positive attitude, and experience with vocational evaluation, the Office of Special Education of the Board of

Education of Baltimore County committed itself to seeking a method to make vocational evaluation available for intellectually limited students as a continuing component of its curriculum.

ACKNOWLEDGMENTS

It is people who ultimately make any effort worthwhile and successful. Within the helping community of the profession of education is found a unique "breed of animal." This relatively small group of people has foresight, is willing to ask Why? They are tuned in to our dynamic and changing society, and are willing to take a chance and try something new. Finally, they are willing to look at tradition realistically and challenge time-honored techniques and methods so that innovation and imagination are introduced into the scene of education. Most important, these people work together, uniting others in their enthusiasm and desire to serve students who, because of some problem not of their own doing, need extra help in order to succeed.

Those persons who have helped the staff and ultimately our students would be too numerous to mention. A listing of their names would fill a booklet the size of this report. Suffice it to say, the cooperation and assistance rendered to the staff which enabled them to complete their mission was outstanding. The students who were vocationally evaluated received the best, most complete, and hopefully, the most realistic and comprehensive appraisal that was available. The goal of the staff was to provide the most useful service available, utilizing as many resources as possible.

To those organizations that were involved: the Federal Government, Department of Health, Education, and Welfare, Social and Rehabilitation Service; the regional office of Social and Rehabilitation Service; the Maryland State Department of Education, Division of Vocational Rehabilitation and Division of Vocational-Technical Education; the Maryland

Vocational Evaluation and Work Adjustment Association; the Board of Education of Baltimore County; the Black & Decker Manufacturing Company; the Singer/Graflex Company - Friden Division; the Humble Oil and Refining Company; the Baltimore League for Crippled Children and Adults; Baltimore Goodwill Industries; the Rehabilitation Unit of Sinai Hospital; the Pennsylvania Rehabilitation Center; Auburn University; University of Wisconsin - Stout; the Philadelphia Jewish Employment and Vocational Service; the Institute for the Crippled and Disabled, we, on behalf of our students, say thanks for your commitment and your help.

A special note of thanks to the principals, teachers, nurses, and guidance counselors of each school visited during the three years of the project. Courtesies of every conceivable nature were extended to make the brief stay of the mobile unit staff enjoyable and comfortable.

Most important, our thanks to the students. They responded to vocational evaluation with enthusiasm, motivation, and a desire to perform in a manner that exceeded all expectations. They made the project successful and continually challenged the staff to be more resourceful and imaginative in working with them. It was, indeed, our pleasure to serve them.

Personal thanks are due Dr. Jerome Davis for his foresight in initiating the project, and Miss Edna Warwick for accepting the directorship of the project in addition to her administrative responsibilities as a supervisor within the Office of Special Education.

The people of the mobile unit were brought together three years ago and are now a close knit operating family - each with a better understanding of themselves, their students, and each other. To Elsie, a gem, our secretary,

confidante, surrogate mother to many of our young people, evaluator aide and master of many skills, a special tribute for accepting the challenge of a new role within her professional career with the Board of Education. Elsie is a beautiful person, who has in addition to her technical proficiency, provided valuable insights into human dynamics and understanding. She has offered direction on many occasions when others could not see the forest for the trees.

To Jack, who wouldn't stay retired, thanks for your expertise. Following 30 years with the Bethlehem Steel Company, Jack joined our staff as an evaluator aide. His sensitivity to people, his knowledge of competitive employment, and his skill in working with young people were invaluable assets to the total effort.

To the secretaries in our office, thanks to Audrey, Alice, and Margaret. They have assisted in many, many ways in order to keep the staff and the project on its charted course. Their individual contributions to our effort is deeply appreciated and was most necessary to fathom the intricacies of the administrative maze of the organization.

Thanks to George, Jim, and Bill who move the mobile unit with professional competency. We are grateful for their high degree of knowledge and skill in getting us in and out of "tight" situations.

There are many more people who deserve our thanks and we appreciate their contributions to the project. Suffice it to say - thank you!

It is People, their interest, their commitment, and their desire to serve young people that have contributed in so many ways to help us fulfill our goal.

ABSTRACT

The focus of the project centered on the ability to deliver a unique service (vocational evaluation) to the intellectually limited students within the tenth grade of the Baltimore County schools, the fourteenth largest school system in the nation. The size and shape of the county necessitated the use of a mobile facility to service those students who were candidates for vocational evaluation.

Since the TOWER System of vocational evaluation was the primary tool of assessment, a vehicle capable of housing it was needed. The vehicle also had to offer compatibility with existing mobile facilities available within the Board of Education of Baltimore County.

For utility purposes, vocational evaluation and the recommendations resulting from the process had to be capable of being integrated into the curriculum to provide direction to the professional staff that would guide their efforts toward helping the student progress from dependence to independence within the community.

The planning for the project took more than one year and the project was in operation for three years. A total of 330 students were evaluated during the three-year life of the project. Funding sources were the Department of Health, Education, and Welfare, Social and Rehabilitation Service, the Maryland State Department of Education, Division of Vocational-Technical Education, and the Board of Education of Baltimore County.

The results of the project, although tentative and demonstration rather than research, provided insight into several realms of activity. Each of

these activities could be beneficial to the future development of the student, the educational service, and those ancillary services available to the student within the school and the community.

The most significant result indicated that the service, being mobile and visiting all senior high schools with special classes, offered an assessment that was consistent, uniform, and standardized and had a positive influence on the student. The self-concept of the student was improved because the service of vocational evaluation provided an individualized appraisal of potential that incorporated specific recommendations. These recommendations included both school and community centered ancillary services and, most important, allowed the student to engage in work-sampling activities directly related to familiar jobs through the use of a simulated work atmosphere. The student could also establish an identification with the realities of various job tasks. Also, the student's learning potential was enhanced, since the educational programming was individualized in order to satisfy his particular needs.

The special service of vocational evaluation within this public school system was extended to include all types of students. It was demonstrated that a sensitivity toward the non-academically oriented student was encouraged by the presence of vocational evaluation since:

1. The service created more awareness of the non-academic phases of achievement and promoted pride and prestige in "doing a job well". Every job and every worker plays an important role in today's society, whether it be bank president or garbage collector.

2. The behavior and performance were linked to occupational success and could be measured in terms that were defined and understood.

3. The service developed an awareness of the student's ability to assume a useful role in the community and in his desire to live as normal and as full a life as possible. (Some students could not master reading and writing but possessed other skills that would have otherwise gone undetected.)

C O N T E N T S

	Page
INTRODUCTION	1
STATEMENT OF THE PROBLEM	3
REVIEW OF RELEVANT LITERATURE	6
DESCRIPTION OF SETTING	11
GENERAL CHARACTERISTICS OF THE POPULATION OF BALTIMORE COUNTY	16
GROSS POPULATION DENSITY	17
BALTIMORE COUNTY PUBLIC SCHOOLS	18
SENIOR HIGH SCHOOLS IN BALTIMORE COUNTY SERVED BY THE MOBILE UNIT	19
METHODOLOGY	20
THE DELIVERY OF SERVICE	21
THE SERVICE OF VOCATIONAL EVALUATION	32
POPULATION AND SAMPLE	43
VARIABLES AND HYPOTHESES	48
DATA	50
RESULTS	52
DISCUSSION AND IMPLICATIONS OF RESULTS	55
THE IMPACT OF THE SERVICE UPON THE EDUCATIONAL COMMUNITY	60
SUMMARY	67
BIBLIOGRAPHY	69
APPENDIX	70
I. A. A JOB DESCRIPTION OF STAFF MEMBERS	71
B. PROGRAM FOR CHILDREN WITH INTELLECTUAL LIMITATIONS	73

page

C. VOCATIONAL EVALUATION PROGRAM 76

II. INDIVIDUAL CHARACTERISTICS OF EVALUEES 93

III. WORK SAMPLE DESCRIPTIONS 82

WORK CHARACTERISTICS 89

PERSONALITY CHARACTERISTICS 92

IV. FORMS

A. BACKGROUND INFORMATION 93

B. VOCATIONAL TRYOUTS 96

C. JOB INTERVIEW 97

D. HOURLY CHART 98

E. SAMPLE REPORT 99

V. FOLLOW UP

A. 1 - 2 YEAR 105

B. 3 YEAR 107

C. JOB DEVELOPMENT COORDINATOR 111

INTRODUCTION

The utilization of vocational evaluation within an educational setting and the ultimate incorporation of the recommendations of the evaluation within the curriculum for the secondary schools was the goal of this project. To achieve this goal, a means to deliver the service to the student rather than the student to the service was necessary. Previous experience showed that only a portion of the total population could be served by transporting the student to the service.

What was apparent initially was a need to devise a capability whereby all students could share the benefits of vocational evaluation. In developing this capability, several vital factors emerged as guidelines in the planning:

1. The service had to be mobile.
2. It had to have the ability to serve all students who were considered candidates.
3. All of the selected students had to be served within the school year.
4. The physical facility itself had to be compatible with existing school facilities.
5. The recommendations of the vocational evaluation had to be readily integrated into existing service systems, i.e.; secondary curriculum for Special Education, Division of Vocational Rehabilitation services, and other community agencies serving a similar population.

After many months of planning, funding was obtained for a Research and Demonstration project sponsored by the Social and Rehabilitation Service of the Department of Health, Education, and Welfare, the Division of Vocational-Technical Education of the Maryland State Department of Education, and the

Board of Education of Baltimore County.

The Maryland State Department of Education, Division of Vocational-Technical Education provided the necessary funding to purchase the mobile unit and all of the hardware. The Social and Rehabilitation Service, Department of Health, Education, and Welfare funds were awarded for three years to provide salaries and software. During the first year, Federal funds paid 100% of the operating costs, the second year two thirds of the total cost, and the final year one third. The difference was paid by the Board of Education of Baltimore County. The latter contribution was one third of the total operating cost during the second year, two thirds in the third year, and then 100% from that point forward when the facility and personnel were absorbed into the normal operating budget of the Board of Education of Baltimore County.

The duration of this project was from May 1, 1970 to May 31, 1973.

STATEMENT OF THE PROBLEM

Historically, students with intellectual limitations have experienced difficulty with entry level employment activities. This is due in part to the nature of their affliction and its manifestions and to a lack of exposure to social situations and other developmental activities whereby youth integrate and synthesize experiences, learning, and exposure into an orderly whole that becomes a pattern for living. The special class student may not have developed this capability at the same point in his personal growth as his peer group. Therefore, it is to his advantage to be aware of those personal qualities he possesses and to develop them so that they become assets for employment.

If our task is to assist the student with his personal growth, we must establish criteria as a basis for measurement. Data have shown that students from the special classes have lost jobs, not through lack of an occupational skill, but because of poorly developed interpersonal skills. Therefore, the results of the assessment service should include realistic recommendations that can be achieved through the use of existing school and community resources.

A positive attitude toward work and appropriate work habits become the essential elements to be considered during vocational evaluation. Of equal importance is the capability of serving all eligible students within a specified allotment of time. Of secondary importance are the assessment of the student's potential for employment within a range of appropriate occupational activities and the utilization of those existing ancillary and remedial services available within the school system and community to help the student achieve this goal.

The structure of existing private agencies offering vocational evaluation

were not flexible enough to reduce the time required for evaluation. The rigid school bus schedule and the distance students had to travel each day limited the work during evaluation. Therefore, the facilities that offered vocational evaluation to the special class student had limited capability to handle this extraordinary request for service in addition to their usual flow of clients recruited from other sources.

It was apparent from the projected population figures during the planning stage of this project that the total number of students within the special classes would increase but the degree to which they would increase was uncertain. Consequently, the best solution for this problem was to deliver the service to the student rather than to take the student to the service. By delivering the service to the student, several benefits were immediately apparent:

1. More total hours per day were available.
2. Transportation problems were eliminated.
3. The students remained in surroundings that were familiar to them.
4. The professional staff members who knew the students were close at hand.
5. Curriculum suggestions resulting from the evaluation were reviewed with the students' teacher(s).
6. Situations that could have been anxiety provoking for the students were minimized.
7. The service of vocational evaluation became identified with the school system.
8. The concept of vocational evaluation gained acceptance as the professional staff became familiar with the recommendations and interpreted them to the students' families.

The need for vocational evaluation had been established and the technology

existed with which to do the job. The remaining task was to develop a method of service delivery to those eligible students at their home schools.

REVIEW OF RELEVANT LITERATURE

The mobile concept is relatively new in educational settings. It has been introduced in school districts within several states in widely separated locales, but there was a diversity of vehicle functions, utilization, and construction. Therefore, a true assessment of the mobile concept on a nationwide basis was not possible.

Due to the newness of the mobile concept there was a lack of published, functional evaluative studies. The criteria to measure the effectiveness of the mobile concept, therefore, appears to be a measurement of the effectiveness of a service housed in a mobile facility and the utilization of the available service within its area of activity.

Published Material

Numerous publications have emphasized the need for improved vocational programs to combat dropouts. Among the recommendations for correcting the dropout problem in the NEA publication, Dropout Studies, were: 1) more in-depth data about the student and/or periodic follow-up (project evaluation would include follow-up of clients served), 2) variations and adjustments in the selection of appropriate programs and courses for the pupils (it was anticipated vocational evaluation would provide a basis for such curriculum modification), 3) introduction of programs of "compensatory" education, intervention, or work-study (the service of vocational evaluation would complement the currently functioning work-study program), 4) further involvements of various groups, such as teachers, administrators, parents, and community groups. The implementation of the project emphasized the team approach.

In a Clearing House article (36:481-82, April 1962) Stahlecker recommended two requisites to successful employment in our technological society. These were a modified secondary school program leading to a high school certificate (currently available in Baltimore County) and a vocational training program planned especially for the adolescent slow learner.

Similar recommendations were provided by Gragert (Journal of Rehabilitation, 28:35-37, May-June 1962). He contended that the vocational potential of the mentally retarded could be increased by more effective use of preparation for the working world in the secondary special education programs. Earlier case findings and implementation of the school and Division of Vocational Rehabilitation programs were necessary. Kolstoe (American Journal of Mental Deficiency, 66:472-482, November 1961) reported the need for more individual vocational evaluation. He examined discriminating factors between employed and unemployed special class students. The group which subsequently became employed not only had superior skills to begin with than did the unemployed group, but were also able to use these skills well in a work situation.

Existing Facilities

The lack of published data on mobility caused the staff to explore other sources of information in planning and designing the mobile unit. The Board of Education of Baltimore County, at the time of the project planning, had in use a mobile unit or trailer, 10 feet by 40 feet, commercially designed and built, housing multimedia equipment and materials. It offered technical service related to audiovisual instructional equipment and materials to the elementary schools within the county. The success of this first mobile unit led to the acquisition of a second and larger unit, 48 feet by 12 feet, designed to offer the same service to secondary schools. With two mobile units

in operation, the concept of mobility was accepted by the school system. The addition of a third mobile unit did not offer any unusual operational problems, since the basic unit and its operational hardware and fittings were to be compatible and interchangeable with the existing equipment.

Visits To Manufacturers

In seeking manufacturers of mobile units, either self-contained or trailered types, the planning committee undertook several trips to explore the availability of manufacturing facilities and to determine compatibility of their equipment with the existing units. Equipment from Travelab was considered, and the planning committee examined their product and manufacturing facilities in Greensburg, Pennsylvania. Intermodular Industries of Rahway, New Jersey was visited also. In addition, several local manufacturers of mobile equipment in Baltimore were contacted and visits were made to these facilities. The committee also extensively examined recently acquired media services mobile unit of the Board of Education of Baltimore County, built by International Industries of Baltimore.

The committee explored the use of mobile units in other school systems, where they are being used to provide facilities to schools and cooperative school groups that cannot afford full time professional personnel and specialized equipment in multiples needed within all school plans.

Dr. Phillip Lewis, President of Instructional Dynamics, Inc., Chicago, described in Audiovisual Management how mobile equipment helped schools to meet needs. He indicated that Pittsburgh, Pennsylvania had three buses that traveled in deprived neighborhoods to help children with speech and hearing defects; Placentia, California, Lewistown, Pennsulvania, and North Olmstead,

Michigan had reading specialists housed in specially equipped vans; Madison, Wisconsin used mobiles to show teachers how to better use audiovisual equipment; and Biloxi, Mississippi used a custom built trailer to house a fully equipped language laboratory. Cleveland, Ohio and Atlanta, Georgia had similar units to the proposed unit Baltimore County was planning, but they differed in operation. Both units incorporated inservice training with vocational evaluation. The Georgia plan was Board of Education sponsored; while the Cleveland unit was a Division of Vocational Rehabilitation project. Former Governor Winthrop Rockefeller of Arkansas initiated mobile vocational shops for his state to enhance the Vocational Education program. This, again, was a program devised to service those people who could not reach a stationary center.

Visits To School Districts

A group composed of Board of Education of Baltimore County Special Education staff members and specialists from the Maryland State Department of Education, Division of Vocational-Technical Education, traveled to Florida to visit several school districts in which mobile units were operating. This exploration gave the committee an opportunity to see the value and significance of the mobile concept when applied to school districts of various sizes. The concept of mobility provided the capability of offering service to several school districts where this need existed and where the lack of resources precluded the offering of service. The several school districts combined resources and offered this service in a mobile facility to those persons eligible.

Since published material concerning the mobile concept was minimal, the information gathered was unique in that every known source was contacted and

a visit made to assure that broad guidelines for serviceability, function, and construction of the mobile unit was appropriate. This extensive examination of mobile units and their method of service delivery was invaluable as the project became operational.

DESCRIPTION OF THE SETTING

The setting for the project will be discussed from two points of view. The first portion will focus on the political subdivision of Baltimore County, Maryland, not to be confused with Baltimore City. Secondly, the discussion will consider the structure of the educational program and the ancillary services available to the special class student.

The Community

Baltimore County virtually surrounds Baltimore City in horseshoe fashion. It is comprised of a total land area of 610 square miles and has a 173 mile Chesapeake Bay tidal waterfront. It touches four other Maryland Counties and one other state. It is bounded on the south by Anne Arundel County, on the southwest by Howard County, on the west by Carroll County, on the east by Harford County and on the north by Pennsylvania's York County. Baltimore County is located in the heart of the state.

Baltimore County is unique among metropolitan areas in the United States in that it contains no incorporated cities or towns, all government functions being performed by the county. The result is an area free from a multiplication of taxes, duplication of services, and divisions of authority. Fifty-five percent of the total county budget is used for public education purposes. This represents seventy-five percent of the total education budget; the remaining twenty-five percent is provided by state, federal, and other sources.

The post-war rush to "suburbia", which changed Baltimore County's basic character from predominantly rural to predominantly urban, is still continuing, and the pace has hardly eased. The population in 1970 was in excess of 621,000, while the projected population for 1980 is approximately 730,000.

Despite the urbanization near the City of Baltimore, agricultural land is still available, particularly in the northern sections of Baltimore County. Ranking near the top in numbers of farms in the state, the county's mild climate, productive soil, and ready access to large markets are leading factors in its ability to produce a great variety of crops. The county's physical characteristics tend to insure the permanence of large areas of farm land regardless of the increasing demand for residential and industrial properties. Currently, Baltimore County's businesses include over 500 industries which employ approximately 144,000 workers who receive about one billion dollars in wages and salaries. Existing diversified industry and business range from steel ingots to cloth, from huge ships and yachts to embroidery.

Due to the nature of the population to be served and the size and spread of Baltimore County, some type of facility other than the traditional building was deemed necessary in order to provide a valid assessment of those students who might be candidates for vocational evaluation.

The School

The project offers the service of vocational evaluation and the capability of delivering the service to students of the fourteenth largest school system in the nation (135,000 students). The Board of Education of Baltimore County is one of twenty-four school systems within the State of Maryland, one for

Baltimore City and one for each of the twenty-three counties. Each school system operates as an autonomous unit.

The program for the mildly intellectually limited student in Baltimore County, of which the Mobile Unit for Vocational Evaluation is an integral part, was established in 1953. Special classes are provided from entrance in school to completion of the program in senior high school. Students are placed in the program when an individually administered test score of mental ability ranging from 50 to 79 is obtained by a certified psychologist. Flexibility of the program allows for integration of students into regular programs on a part-time basis and movement of the students out of the program when achievement levels improve.

The Curriculum

The curriculum for the intellectually limited student has had as its main emphasis the preparation of the individual for independence in the community. A developmental program was written in 1963, primary through senior high school, which included content necessary for the endeavors of the program. In 1970, a further step was taken with the publishing of a secondary guide of objectives written so that behaviors of the student could be observed in:

Oral Communication

Written Communication

Motility

Social Competencies

Vocational Competencies

The components of career development were incorporated so that educational teams could use all the sources available to determine what vocational experiences

were necessary to prepare the student for independence in the working world.

The Student

The Mobile Unit for Vocational Evaluation is integrated into the educational program at the 10th grade or, more specifically, when the student enters senior high school. After the evaluation the student, selecting from the alternatives presented to him, is scheduled for either vocational training, personal and/or work adjustment training, or work experiences in the community or school. Planning is based upon the readiness and the ability level of the student. These experiences are coupled with remediation in the special classroom, integration into other programs in the school, and all other social activities that are available to any student in a high school.

Prior to the evaluation, the student has progressed through a special program in the elementary and junior high schools. At these levels, emphasis is placed on career exploration. At the junior high school level the student explores job families and begins to look at himself as a worker. Part-time jobs in the community are encouraged and in-school work experiences are provided.

Available Services

Many community services and agencies are available to students in this large suburban school system. Referrals are made to the many social and medical facilities in both Baltimore County and Baltimore City with the guidance of the public health nurse, the county health department and the school nurse, along with the private physician. The Department of Social Services and the Juvenile Court work together to improve environmental conditions when possible. The Mental Health Association provides regional clinics that

are available to all students and parents. Counselors from the Division of Vocational Rehabilitation follow the students through their High school program and work with them beyond high school as long as the need for individualized assistance exists. A number of centers for work adjustment training are available in the metropolitan Baltimore area.

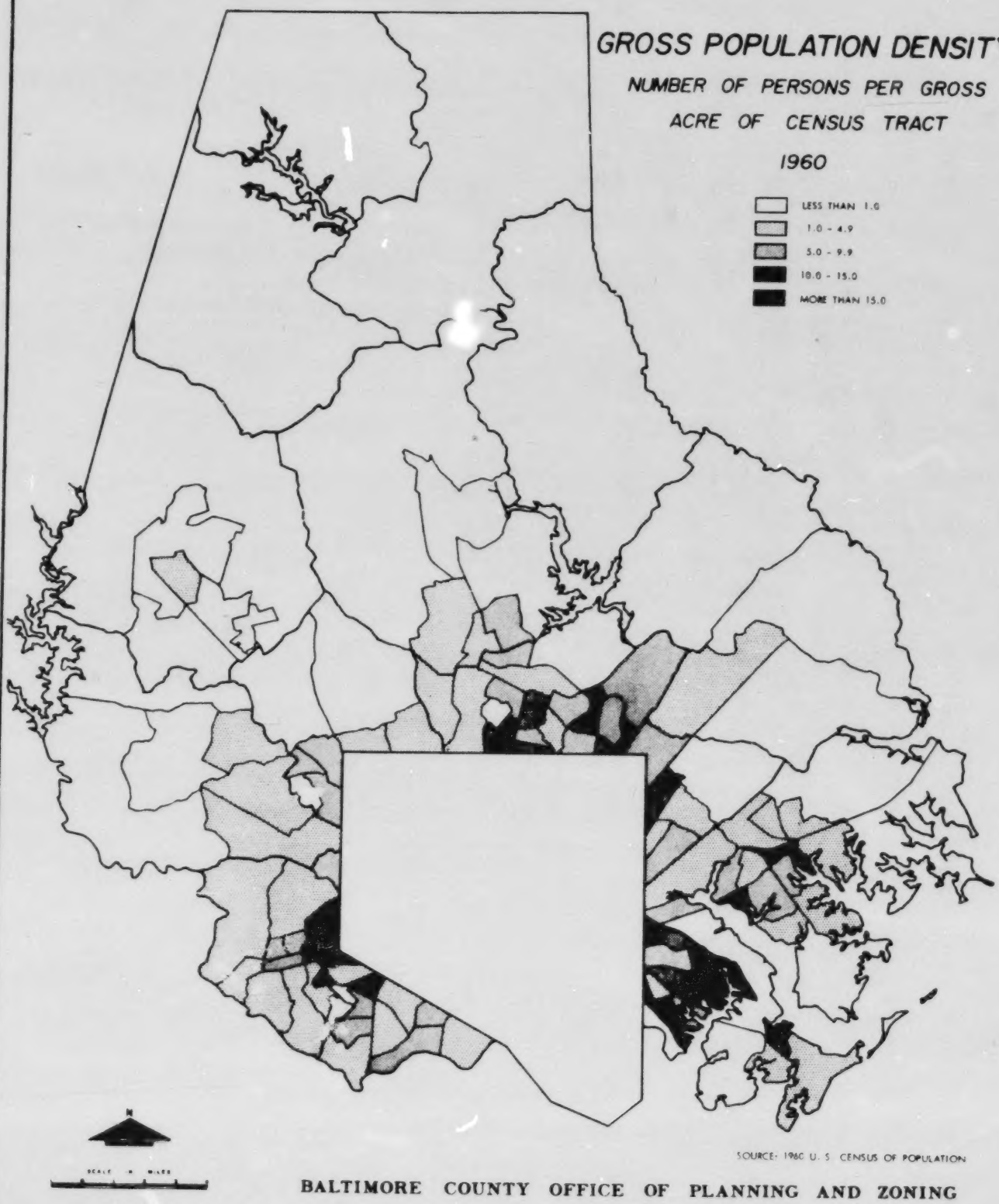
The implications of the vocational assessment process have played a significant role in curriculur changes. Community and school related services have been more fully utilized since the introduction of the project. This has occurred as a direct result of implementing the recommendations that have emanated from the vocational evaluation.

A commentary relating to the dynamics of the school population within the framework of the curricular guidelines, the political structure of the county, and the allied professional community is vital to an understanding and grasp of the environment in which the unit operates.

GENERAL CHARACTERISTICS OF THE POPULATION OF BALTIMORE COUNTY

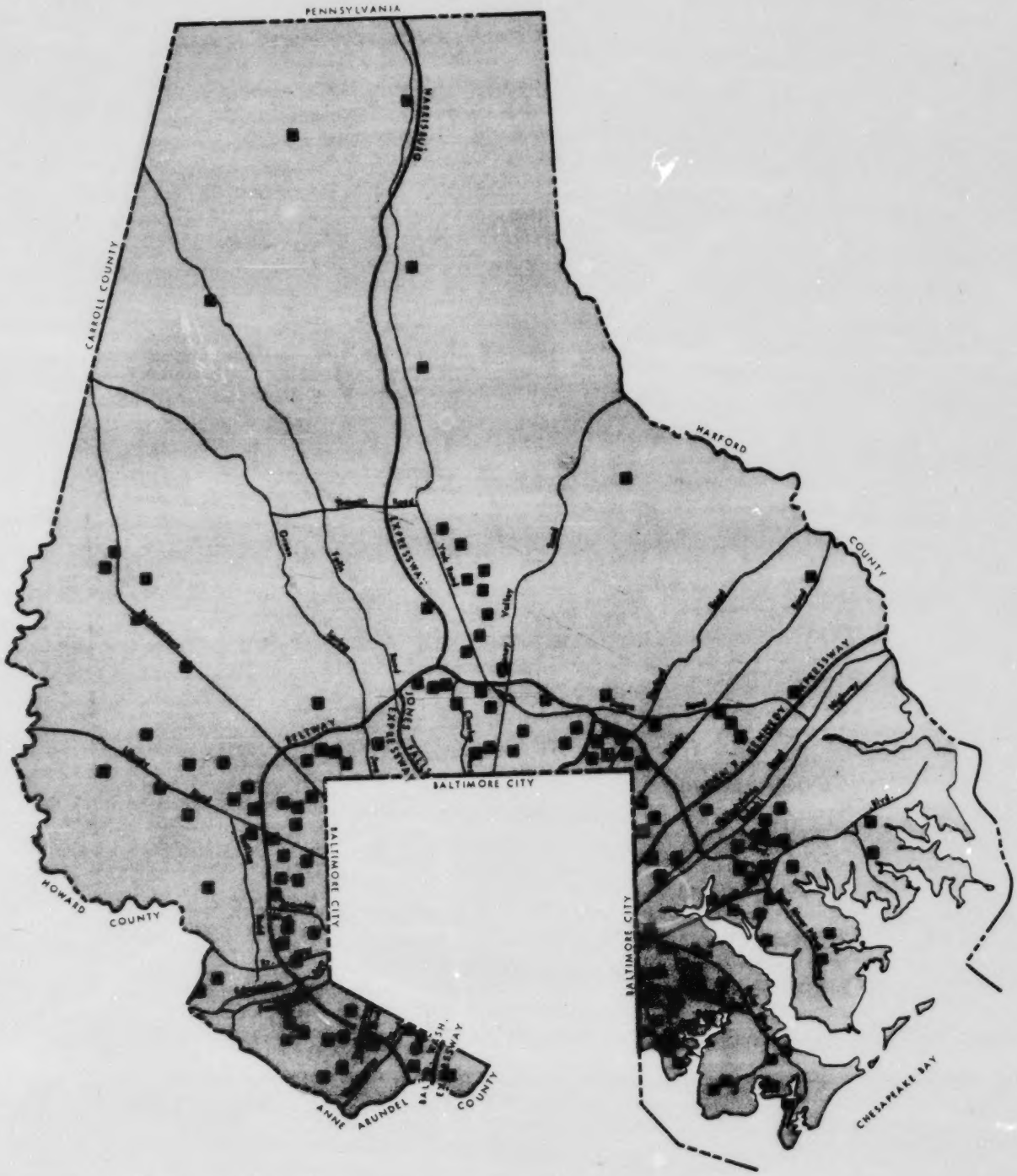
Total population		621,077
White		589,989
Negro		19,597
Percent Negro		3.2
School enrollment (k - college)		184,446
Median school years completed		12.1
Percent high school graduates		52.8
Total employment (labor force)		256,033
Working in Baltimore County		117,412
Primary types of employment		
Manufacturing, general		71,469
Manufacturing, durable goods		50,516
Retail trade		42,998
Public administration		21,790
Educational services		19,011
Construction		15,481
Finance, insurance, real estate		15,315
Health services		13,890
Wholesale trade		12,922
Other professional, related services		10,340
Income, total of all families		162,375
Median income		$ 12,081
Mean income		$ 14,047
Type of income	Total persons	Mean wage
Wage/salary	150,241	$ 12,471
Non-farm, self employ.	15,690	$ 10,527
Farm, self employ.	1,328	2,431
Social Security	26,205	1,684
Public assist/welfare	2,511	$ 974
Families with income below poverty level		5,610
Percent of all families		3.5
Median income		$ 1,671
Persons with income below poverty level		27,672
Percent of all persons		4.5
Total housing units		190,773
Owner occupied		129,572
Cooperatives/condominiums		157
White ownership		126,851
Negro ownership		2,395
Value of owner occupied units - median		$ 17,500

FIGURE 2


GROSS POPULATION DENSITY
NUMBER OF PERSONS PER GROSS
ACRE OF CENSUS TRACT
1960
LESS THAN 1.0
1.0 - 4.9
5.0 - 9.9
10.0 - 15.0
MORE THAN 15.0
N
SCALE IN MILES
SOURCE: 1960 U. S. CENSUS OF POPULATION
BALTIMORE COUNTY OFFICE OF PLANNING AND ZONING

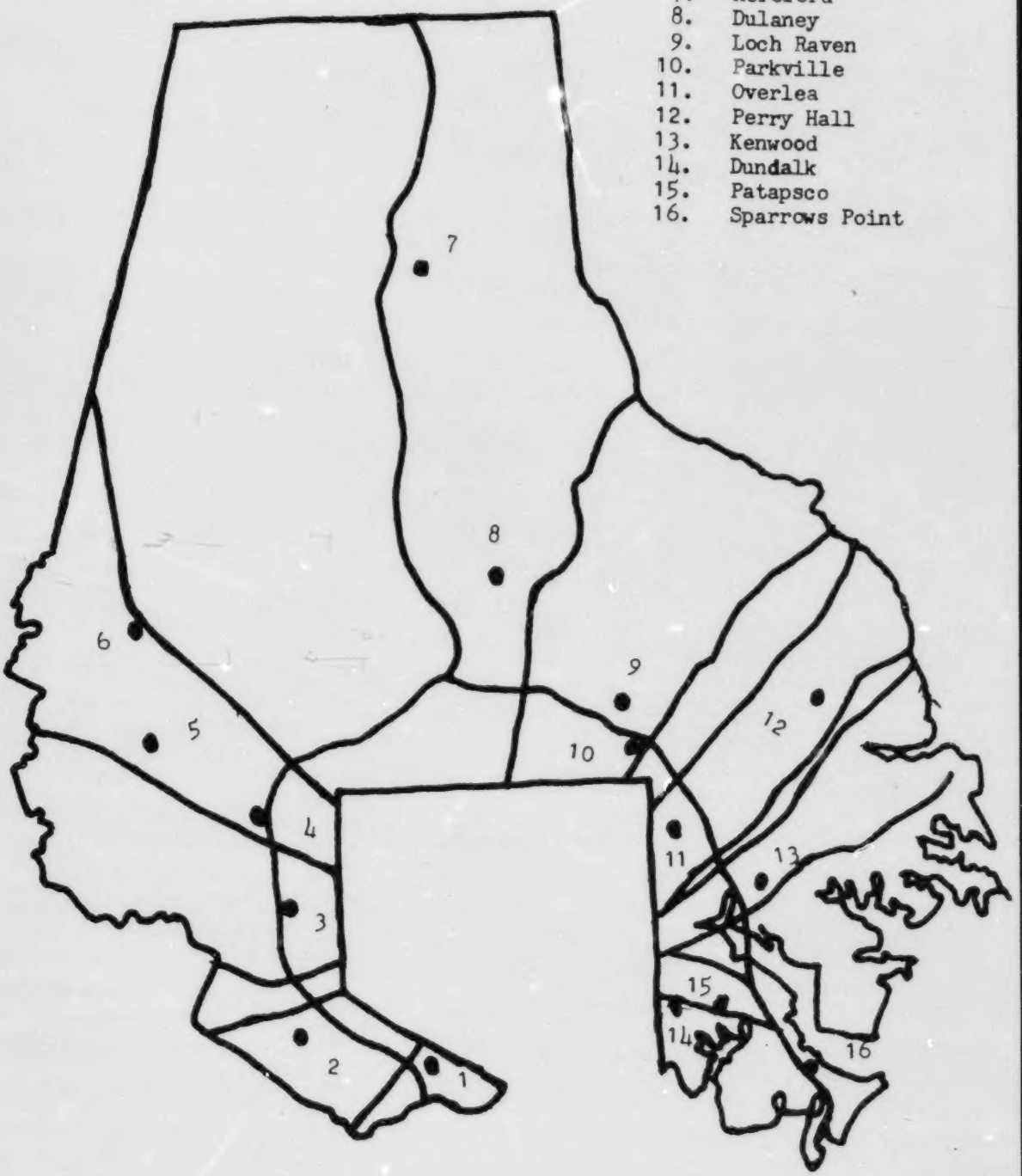
PUBLIC SCHOOLS

Accompanying map graphically shows strategic location of Baltimore County Public Schools.



Senior high schools in Baltimore County served by the mobile unit.

1. Lansdowne
2. Catonsville
3. Woodlawn
4. Milford Mill
5. Randallstown
6. Franklin
7. Hereford
8. Dulaney
9. Loch Raven
10. Parkville
11. Overlea
12. Perry Hall
13. Kenwood
14. Dundalk
15. Patapsco
16. Sparrows Point



METHODOLOGY

The methodology focuses upon the two primary aspects of the project (1) the concept of mobility (the ability to deliver the service) and (2) the process of vocational evaluation itself and its integration within an existing curriculum. The mobile unit was specifically designed to house the TOWER System of vocational evaluation. As the staff acquired experience in moving the mobile unit and in administering the evaluation, certain procedural modifications were obviously required which subsequently made both the movement of the mobile unit and the testing procedures effective and efficient.

Because of the non-specific nature of the disabilities found within the special class population, it became necessary to establish a system of on-going appraisal to insure that the evaluative procedures used were in actuality measuring what they were intended to measure. Some modifications to the procedures required for moving the mobile unit were made to effect greater safety -- to minimize the risk of injury to other persons and vehicles when moving on public roads and to increase the stability of the mobile unit while it is being readied for placement and usage at a school. The methodology discussed in the following sections will attempt to explain the delivery of the vocational evaluation service provided to intellectually limited students within the Board of Education of B altimore County, and the nature of that service.

THE DELIVERY OF SERVICE

The mobile unit for vocational evaluation is a large trailer-type vehicle. It was built in the Baltimore area by a company whose speciality is modular construction. This is the combining of two types of construction; mobile homes and modular. The advantages are: (1) durable and substantial construction that has the ability to withstand frequent movement, (2) a facility that is self-contained, needing only electrical power to substain total operation of tools, equipment, heat, and light, (3) a vehicle that is compatible with similar county-owned vehicles and has minimal trailering capabilities.

Using a similar county-owned trailer as a guide, a preliminary plan for construction was developed. The plan was modified according to the experience of the staff of the existing trailer and in accordance with the needs of vocational evaluation. Several advantages were gained by using an existing trailer as a prototype in developing a working plan for the mobile vocational evaluation unit. These included: (1) the electrical connections supplied for the existing Mobile Educational Technology trailer were available for use by the planned Vocational Evaluation unit; (2) a tractor, an experienced driver and a helper employed by the Board of Education of Baltimore County were available to move the existing mobile unit as well as the planned mobile unit; (3) locations for the mobile unit at the schools to be visited were established and arrangements were made for the temporary needs of the staff while at each site; (4) avenues of cooperation and communication between school staff and mobile unit staff were explored and developed; and (5) interchangeable parts were available in the event of a breakdown. Cooperation between the mobile unit staff and local and State Police and the State Roads Commission had

been previously developed; this was sustained by the new staff.

The mobile unit for vocational evaluation was ordered in July 1970 and received in September. It became operational in October 1970 at Franklin Senior High School.

Construction Plan

The construction plan for the mobile unit follows closely the plan for the existing unit with some modifications:

1. The doors lock securely and are tamper proof.
2. The siding, doors, and joints are secured so that they are more weather tight, thereby preventing rain from directly entering the areas.
3. The trailering capabilities are improved by moving the axles farther to the rear of the unit, thereby placing additional weight on the hitch.
4. The heating, cooling, and ventilating system are improved by insertion of duct heaters in the air ducts farthest from the source of heat to better equalize the temperature and humidity within the individual compartments.
5. A heat pump is provided with a larger BTU capacity than that on the existing mobile unit so that extremes in temperature and humidity can be better controlled.

The Design

The interior of the mobile unit was designed with the TOWER System in mind. The TOWER System offers tasks that can be divided into the following two basic categories: clean and quiet, noisy and dirty. Thus, two compartments for testing and one for the staff to use as an office were considered as the minimum basic floor plan.

The mobile unit for vocational evaluation is 48 feet long and 12 feet wide; including the hitch, it is 52 feet long. The chassis is welded 10-inch steel I beams; the framing is welded steel which is braced at the four corners

and at two equally spaced intervals on both sides. Onto this steel framing is placed a wooden frame of 2 x 4's. The exterior is covered with 3/8 inch plywood and a final layer of aluminum sheeting is locked together in a horizontal manner to provide a waterproof surface. The walls are filled with fiberglass insulation which is covered with walnut paneling. There is an area of 12 to 18 inches of space between the ceiling and the roof of the vehicle which contains (1) fluorescent lighting fixtures, (2) ventilating ducts, duct heaters, and heat pump, (3) electrical wiring, (4) telephone wiring, and (5) dead air space to increase the effectiveness of the insulation.

The mobile unit contains three compartments. The two larger compartments are separated by a smaller compartment which serves as an office for the staff. One large compartment is a testing room for clerical (clean and quiet) work samples, while the other is used for mechanical (noisy and dirty) work samples. The floor in the clerical and office areas is carpeted and vinyl tiles covers the floor in the mechanical area. There are no windows in the mobile unit. This was planned to reduce the risk of vandalism and to minimize the possibility of disturbing the students who were being evaluated.

The mobile unit rides on eight wheels and four axles. Brakes are activated electrically. The mobile unit is free wheeling when disconnected from the trailer and the electrical supply. A standard ball and coupler type hitch attaches the mobile unit to a modified Chevrolet gasoline powered tractor.

The mobile unit is self-contained with the exception of plumbing. One electrical connection of 600 volts, 100 amperes supplies power to operate all tools and equipment. All motors and systems in the mobile unit are wired for 100 volt operation. The school building receiving the mobile unit must

necessarily be wired with an appropriate electrical connection located relatively close to the power entrance into the building so as to minimize the possibility of voltage drop.

Maneuverability

Consideration must also be made for maneuvering the total length of the tractor and mobile unit; approximately 70 feet. The consideration of the location of the mobile unit at a school must assure that service and/or access roads are not blocked for the normal flow of traffic, i.e., buses, cars, service and emergency vehicles. The parking location must offer a relatively flat, level surface. The flat surface reduces the possibility of the mobile unit moving, since once it is disconnected from the tractor the electric brakes are inoperative. Also, the mobile unit is elevated and leveled with hydraulic jacks and then placed on wooden blocks to stabilize the vehicle. Otherwise, it would be resting on the wheels and springs and would bounce or jostle as students walk about, use tools, or make any movement to redistribute weight in the mobile unit. From a safety standpoint, the mobile unit is secure once it is on the wooden blocks. Extremes of movement within or without the mobile unit have no effect upon it after it is stablized.

Movement

The moving schedule for the school year for the mobile unit is published prior to the opening of school each September. The proposed route of travel is reconnoitered the day preceding the scheduled moving day. This is done to insure that the roads to be traveled are not under repair, are in good condition, and are wide enough to accomodate the width of the mobile unit and

to allow sufficient room on the road in the event an emergency vehicle passes. Also to be considered are low hanging trees, power lines, the load capacity of the bridges. This is necessary to assure sufficient clearance for the entire length (70 feet) of the combined unit and tractor and sufficient clearance for cornering, turning, etc, so that road signs and other essential highway markers are avoided.

Following this examination and determination of the route, the Maryland State Roads Commission is contacted to request permission to move an oversize vehicle on the stated route on a specific day. Since the mobile unit makes frequent moves within a specific geographical area, the State Roads Commission must be notified of each move and a copy of the permit is carried in the tractor cab during the move. The State Roads Commission grants permission to move on the day and the route requested. It recommends that the mobile unit be moved between 10 a.m. and 2 p.m., the time of least traffic volume. When the mobile unit is on the road, two escort vehicles accompany it. One precedes and one follows the mobile unit, both with flashing amber lights; the chase vehicle displays a sign reading WIDE LOAD.

Preparation for moving the mobile unit includes the placing of equipment from the work surfaces and shelves onto the floor, and the securing of sliding and hinged doors, hanging small tools on tool racks or pegboards, and desk cabinets and drawers with masking tape. All chairs, tables, and other objects that might move are placed face down on the floor, thereby reducing the risk of damage to the item itself or nearby items if the contents of the mobile unit shift as a result of a sudden movement.

When the interior contents of the mobile unit are secure for traveling,

the wooden blocks are removed, thereby placing the wheels of the vehicle on the road surface. The tractor is then coupled to the hitch of the mobile unit and the power cable and telephone cable from the building to the mobile unit are disconnected and stowed. The location at the building is cleared and all vehicles are checked for brakes, headlights, running lights and flashing lights. A final check of the hitch is made before moving into traveling position and onto the county or state road.

In the event the mobile unit must proceed through an area of road construction or must maneuver in such a way as to impede the flow of traffic, a police escort is requested to assist with traffic control. The Police Department of Baltimore County have been most cooperative and responsive to requests made of them.

Maintenance

The mobile unit is inspected between each move for operating lights, serviceable lenses, proper air pressure of tires, good valve stems, and secure wheel lugs. Also checked are the condition of the electrical cable that powers the brakes, brake running lights, and the overall condition of the exterior.

Annually, the undercarriage is checked for wear and is lubricated. The brakes and drums are inspected for wear and operational effectiveness. The steel frame is scraped and painted in those areas where rust is forming or where the steel surface is exposed to the weather and has begun to oxidize.

Even with normal precautions and annual inspections, the wear and tear on a vehicle of this size is great. One of the problems encountered was a leaking roof caused by the flexing of the joints where the siding joins

together and at other points where the roof joints butt. The sealer had become dry and brittle from constant exposure to the weather and the flexing had caused the surface to separate. A roof coating with a butyl rubber base was applied to the entire surface. The paint base remains pliable and forms a secure seal regardless of the degree of flexing and movement.

Moving Problems

Due to the combined length of the tractor and trailer, considerable problems are encountered in maneuvering and securing the trailer. The lack of space to maneuver has caused the loss of several wheels, rims, and brake drums due to extremes of stress and flexing of the undercarriage. Since the mobile unit must pivot 90° to turn into some locations, severe strain is placed on either the leading or trailing axle, depending upon the distribution of weight. This, in turn, causes the wheel and rim to literally spin off from the drum. Wheels have been lost from lugs being loosened as a result of prolonged flexing during movement.

Perhaps the greatest hazard occurs when traveling on limited access, high speed highways. The trailer and tractor have a maximum safe speed of 40 miles per hour and when other vehicles are traveling at 60 to 70 miles per hour, this slow moving caravan is a surprise and shock to many motorists. Traveling at a slow pace is especially hazardous at the interchanges with limited access highways where traffic is changing lanes and vehicles are constantly jockeying for positions and suddenly find they must alter their course to avoid three slow-moving vehicles that are blocking the view of the road. It would be unwise to consider other than a four-lane road when planning a route for a mobile unit of this size. It is also recommended that a mobile unit of this size not be considered for use in hilly terrain.

During its initial year of operation, the mobile unit made thirteen regular or scheduled moves. The second year it moved fifteen times, while fourteen scheduled moves were made during the final year of the project. In addition, there were several non-scheduled moves for maintenance of the vehicle and other purposes not directly related to the function of the mobile unit. Considering the frequency of these moves, the duration of the move, the assigned parking location at the schools, the effects of weather, and normal wear and tear and vandalism, the mobile unit has very adequately withstood all of these exposures.

Preparations for Arrival

To prepare for the arrival of the mobile unit at a local school, an appointment is made with the principal by the assistant project director. The purpose of the visit is to review the operational procedures necessary for bringing the mobile unit to the school, plan for various school services required while at the specific location, and plan for the follow-up conference where each student's performance is reviewed. An offer is extended to assist the local school with professional activities that may be germaine to the service of vocational evaluation. The special class teacher is briefed on the specifics of the process and the students to be evaluated are discussed and certain basic data is obtained.

The school staff assumes the responsibility for readying the school site to receive the mobile unit. Driveways are cleared and staff parking sites are redistributed until the mobile unit is on site. The chief custodian is available to assist with the final placement of the mobile unit on site to assure that fuel oil tank filler pipes are clear and access is provided for underground facilities, i.e., waste containers, grease traps, etc., and to assist

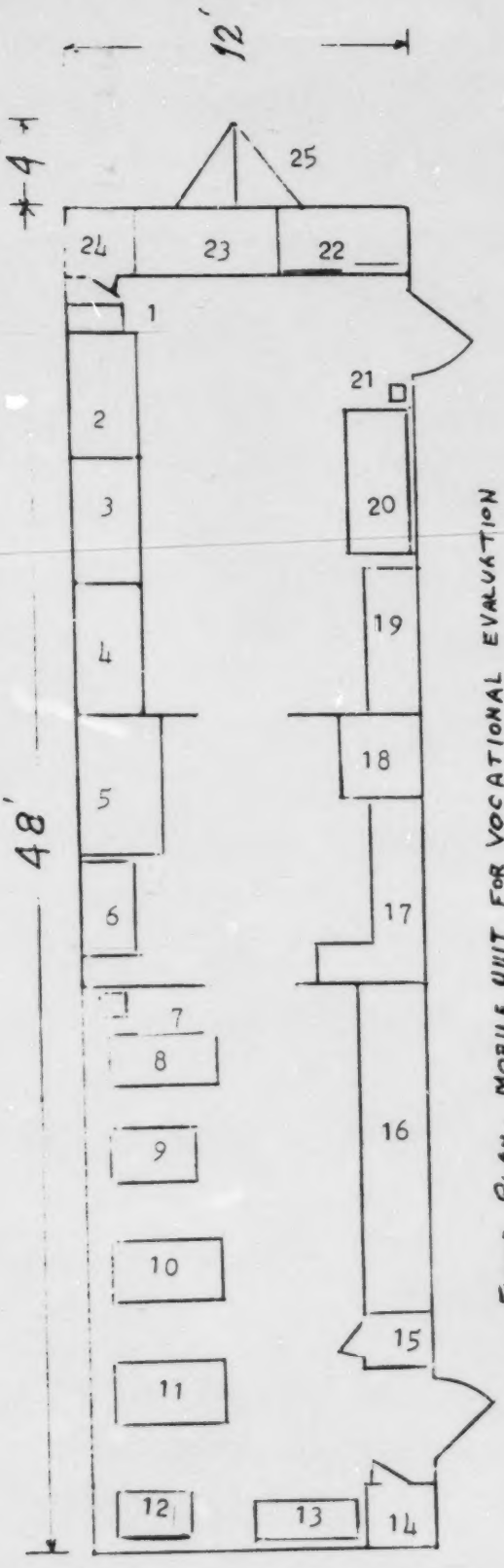
with electrical hook-up.

The warehouse crew -- tractor driver and helper -- are responsible for placing and securing the mobile unit on site in such a manner that once unhitched, the trailer will not move. The crew assists the staff with securing the mobile unit on blocks and with the myriad of details that are encountered in a situation where the safety of students is vital and where the protection of public property is required.

Once the mobile unit is secure on site and its power and telephone cables are connected, the attention of the staff is directed toward putting the interior of the mobile unit in working order. This includes replacing tools and equipment onto the work surfaces, removing tape from doors, hanging tools, and arranging furniture to accept the next group of students. Following the readying of the unit, a visual inspection of the exterior is made to assure that all remains intact and the unit is secure and stable.

The administrative staff of the school is informed that the mobile unit is on site and any miscellaneous concerns are discussed at this time. The special class teacher is also advised of the availability of the mobile unit. The mobile unit staff seeks out the location of various school services that may be needed, nurse's suite, administrative offices, custodian's office, cafeteria, etc.

The overall goal of a procedure of this type is to acquaint the school staff with the arrival of the mobile unit and to anticipate any disturbance to the normal school routine and attempt to reduce or alleviate any unnecessary problems that may be caused by the presence of the mobile unit at a particular school site.



Scale: 1" = 6'

FLOOR PLAN - MOBILE UNIT FOR VOCATIONAL EVALUATION

DESCRIPTION OF INTERIOR

1. File Cabinet
2. Carrel
3. Carrel
4. Carrel

} Typewriter, adder, calculator (interchangeable)

5. Desk - Evaluator Aide
6. Duplicating Machine and Supply Cabinet
7. Gasoline Pump
8. 6 Cylinder Automobile Engine
9. Drill Press & Table, Supplies
10. Work Bench - Fixed Position
11. Work Bench - Adjustable Height (Hi Lo)
12. Radial Arm Saw
13. Industrial Sewing Machine
14. Storage - Raw Materials
15. Storage - Cleaning Materials
16. Work Surface - Electronics, Plumbing
17. Evaluator's Desk
18. Table
19. Work Surface - Filing, Cash Register
20. Work Table
21. Time Clock
22. Storage - Testing Supplies
23. Work Surface - Mail Sorting
24. Clothes Closet
25. Hitch

Storage Cabinets Above and Below Items: 2, 3, 4, 5, 6, 12, 17, 18. Visual Aid Panel Above Items 20 & 23. Tool Racks Above Items: 8, 9, 10, & 11.

THE SERVICE OF VOCATIONAL EVALUATION

Vocational evaluation is the assessment of human potential. It is a process that attempts to help the evaluee better understand himself in terms of defining his assets and limitations. It offers the evaluee objective data relating his aptitudes, abilities, and interests to potential career goals. It is a process of assessment using practical, reality-based techniques and procedures. It is the practical nature of the methodology that sets it apart from the traditional assessment programs as a unique entity.

Vocational evaluation does not compete with traditional programs of assessment. Rather, it supplements, expands, and complements existing known data. The methodology of vocational evaluation differs from traditional assessment in the setting in which the process occurs, the techniques employed, in the synthesizing of data, and in the presentation of the results. Vocational evaluation is a performance-oriented encounter between the evaluee and a work sample. The encounter method places before the evaluee practical tasks which are meaningful to him and which provide an opportunity for the integration of internal needs and external stimuli. Vocational evaluation is a multi-dimensional approach to individual assessment and self-exploration. It is based upon three main components; namely, psychometrics, work samples, and behavioral observations. It is concerned with the total functional ability of the individual. All aspects of the person's behavior and performance are considered when the data is synthesized.

System of Evaluation

The system of evaluation used in the project was based on the TOWER System

of vocational evaluation developed by the Institute for the Crippled and Disabled of New York City. The population, being intellectually limited, could not perform all of the tasks involved within the TOWER System, nor were all of the TOWER work samples appropriate. Therefore, some modifications were necessary. The entire TOWER System of evaluation was available for use with any evaluee who showed potential and who had the necessary background and experience to benefit from exposure to a broad range of work samples. The TOWER System was selected for two reasons:

1. It is a performance assessment of work activities. The students could relate to the work to be done.
2. The basic format of the TOWER System is adaptable to work samples other than those that comprise the system.

The TOWER System was explored to determine how the various work samples might be incorporated into a system that seeks to assess work habits and attitudes and career potential. A review of the placement activities of the job development coordinators indicates that the vast majority of students (in excess of 90%) were placed in jobs that are broadly classified as clerical, mechanical, and service occupations. The employers were satisfied with the special class student as an employee if he demonstrated appropriate work habits and had a positive attitude toward work. A specific occupational skill was seldom required in these entry level jobs. The employer preferred to train the employee.

Using this data as a guide, a series of sequential assessment activities were formulated to (1) explore the student's history; i.e., medical, social, and educational background; (2) determine the student's present level of functioning -- his ability to handle verbal and numerical concepts and incorporate them into meaningful everyday activities; and (3) discover the

career potential of the student considering both performance and behavior. The data generated through vocational evaluation was then reported to the school personnel in terms of recommendations for curriculum strengthening, suggestions for work placement activities both in school and in the community, and when warranted, an indication of the need for ancillary services: medical, psychological, social and/or personal and work adjustment training.

Components of Evaluation

The basic system of evaluation encompassed three components: psychometrics, work samples, and behavioral observations. The three main components underwent continual revision until a methodology evolved that satisfied the fundamental requirements of vocational evaluation and offered a meaningful interpretation of the activities of vocational evaluation to those who would interpret the recommendations to the student either in a classroom or counseling setting.

Basic Data

The psychometric testing revealed the student's ability, interest, and aptitude. The testing included measurable performance on two standardized test instruments and a demonstration of functional use of certain basic skills. These tests were usually administered prior to the arrival of the mobile unit at the school. The testing was conducted by the evaluator aide. The timing of this testing procedure was of some importance because the results could be scored and the student placed on work samples that were appropriate for him when he began evaluation in the mobile unit. The entire time a student was on the mobile unit was spent in "hands on" activities, paper and pencil tasks being kept to a minimum.

Psychometrics may be defined as the use of standardized tests to measure personal interests, native intelligence, eye-hand coordination, dexterity, and manipulative skills. The standardized tests used in vocational evaluation consisted of the Picture Interest Inventory (McGraw-Hill), the Revised Beta Examination (Psychological Corporation), the Bennett-Hand Tool Dexterity Test (Psychological Corporation), and the Purdue Pegboard (Science Research Associates).

The second component of vocational evaluation was the work sample. A work sample is a combination of work tasks presented in a controlled environment, in a standardized manner which simulate an actual work situation. These samples are graduated in difficulty from the very simple to the most complex tasks.

The TOWER System is a standardized system of work evaluation composed of fourteen broad occupational areas: clerical, electronics assembly, machine shop, sewing, jewelry, lettering, drafting, drawing, leathergoods, optical mechanics, pantograph, welding, mail clerk, and workshop assembly. Because of the nature of our student population and local employment conditions, only five of the fourteen areas were used. Also, certain modifications have been made on these TOWER System tasks: clerical, electronics assembly, mail clerk, sewing, and workshop assembly. Specifically, directions were given verbally with additional visual demonstration techniques. Practice exercises were added to aid the student in learning the task. The technique of "test-retest" was used extensively.

Work Sampling

The majority of a student's time was spent with work samples. The student selected the samples he would like to work with and proceeded with them until

they were completed or proved to be too difficult for him to accomplish. If he voluntarily quit a sample and had no other choice, the evaluator offered alternatives based upon an analysis of the student's performance on psychometric tests. Leaving the choice of activities to the student generated his awareness of the occupation as he fulfilled the requirements of the sample and, more important, he got the "feel for the job". The student became aware of the physical demands of the job, the educational requirements for employment, and of his obligations as a worker.

Other work samples were added to the system to broaden the scope and range of the evaluative process. The following activities were either added or improved upon: assembly tasks, electronics, food service, custodial work, nurse's aide, carpentry, bricklaying, motor disassembly and reassembly, mechanical work, stock clerk work, cashiering, and certain tasks such as filing, coding, checking, calculator usage, and others. At the present time, the work samples relate to the following occupational families: structural work, bench work, service, machine trades, and natural occupations. These are areas in which students from the special class have been known to enjoy occupational success.

Additional research was done by the evaluation staff on the Dictionary of Occupational Titles, U. S. Department of Labor, in order to broaden the scope of the program. Worker trait groups were identified which relate to the work samples, and these provided the basis for occupational recommendations. This insured proper standardization and promoted a more realistic basis from which to operate.

In addition to these work samples, pertinent skill areas were added

which gave additional information regarding individual achievement and functioning. These were size discrimination, object identification, business arithmetic, change making, color identification, counting, completing a job application, and telling time.

Work Behaviors

The third component of vocational evaluation was the observation of critical work behaviors. These were behaviors which made a significant difference in whether or not a student would be employed. They related directly to success in adult occupations, ranging from competitive employment to at least sheltered employment or work activities. The following twenty-seven specific behaviors were observed: (1) ability to analyze and reason, (2) attention and work tolerance, (3) clean-up of work area, (4) cooperation, (5) dependability, (6) enthusiasm, (7) flexibility, (8) grooming, (9) initiative in performing tasks, (10) maturity, (11) neatness, (12) perseverance, (13) punctuality, (14) quality of work, (15) reaction to frustration and stress, (16) ability to return from breaks without prodding, (17) adherence to safety instructions, (18) ability to seek help, (19) degree of supervision needed, (20) work attitude, (21) ability to follow verbal instructions, (22) work attitude, (23) improvement in work performance with experience, (24) work speed, (25) ability to follow written instructions, (26) emotional stability, and (27) self-confidence and self-concept. General comments were also made and recorded regarding personality traits such as motivation, ability to relate to authority figures, social skills, and temperament.

The critical observation of behavior within an educational setting of this nature is an indicator of the student's work characteristics and reveals some of the dynamics of his personality within a work setting. An assessment method-

ology of this type is flexible and it was altered several times during the project years to more adequately measure the potential of the population served.

Procedures and Techniques

In order to accomplish the goals and objectives of an evaluation process, a certain methodology and set of procedures and techniques were developed and implemented to insure a scientific, organized, objective approach to individual assessment of the students served in Baltimore County. Prior to entering the five-day evaluation period, the evaluees were briefly oriented to the mobile unit through group tours. They were then exposed to a series of individual and group tests designed to orient them to a testing process which provided information about individual interests, aptitudes, and achievements. These data were used by the evaluator to choose or select individual work samples for the student. Specifically, the student was given the Purdue Pegboard, measuring, lettering, business arithmetic, and job application samples. He was also asked to complete a class schedule and an individual checklist of the activities he preferred to try while in vocational evaluation. This initial testing period lasted approximately three hours.

When the student entered the mobile unit for his first full day of vocational evaluation, he was given a brief orientation regarding the purposes and scope of the process and what was expected of him as a worker. The students were exposed to a tool safety film which demonstrated proper and safe use of power tools found in industry and in the home. During the remainder of their first day the students were given an individual background interview and introduced to work samples. The main purposes of the background interview were

to establish rapport with the student and to obtain specific biographical data pertaining to medical, social, psychological, educational, economic, and vocational factors. Additional individual basic skill testing was completed during the individual interview. All information and data obtained during the evaluation was treated in a confidential manner.

During the second day, additional dexterity tests were administered and work sampling, on an individual basis, was initiated. Group mental ability tests were administered during the third day, followed by individual work sampling on the fourth day. On the fifth day, the student was given a simulated job interview which was designed as a learning experience for him. Feedback was given to the student relative to his overall performance.

Certain techniques, methods, and procedures were implemented to insure the quality of the evaluation service being provided to the student population served in Baltimore County. Strict adherance to standardized testing procedures and rules were maintained. All psychometric testing was conducted in a quiet, confidential atmosphere. All test directions were taped and given in a uniform manner to all students. Normative data was used to rate the student's performance and all students were compared with the same norm group to insure an accurate and fair comparison. The test data used was published by the test manufacturer. Work sample results were rated according to quality and performance standards listed in the TOWER manual and through performance standards and according to criteria obtained from other community evaluation facilities or developed by the staff of the mobile unit.

Since behavior is flexible, a method of rating it uniformly was needed. The reaction of the student to various members of the staff, and to his peer group, and his overall work attitude were vital components of evaluation.

A rating scale was developed for behaviors based on a 1 - 4 point standard. The student's behavior and overall performance was discussed with the total staff before a final rating was given. Notes and observations of individual performance on samples were kept on an anecdotal record in the student's daily work sheet. General patterns of behavior were derived from these specific observations. A method of re-trials was initiated to measure the student's retention and learning capabilities. Diagrams were used extensively. All samples were presented in a logical, sequential manner to insure continuity. The student was given adequate exposure through the practice trials mentioned previously before being rated and assessed.

Uniform Reporting and Recording

Throughout the duration of the project, methodology was under constant observation by the staff to insure that the process of administering the tests and the recording of behavioral observations could be done in a uniform and comprehensive manner. The test instructions were recorded on tape and work sample activities were in written form so that when the student read the instructions (or the staff read them to him) the wording was identical and interpretation could be predicted.

As the staff became more experienced and the methodology more sophisticated, a system evolved that allowed for measurement of the student's total effort. The work samples were broken down into individual tasks and each task was explored to determine the basic skill and knowledge that it required. Additionally, behaviors were examined in a like fashion to determine what behavioral factors were necessary to accomplish the specific task. As a result, every task of each work sample had measurable quantities which could be rated consistently and which was related to specific objectives.

The Report

After the data was obtained, recorded, and evaluated, the final step in the process was interpretation and synthesization of all subjective and objective data. A narrative report was written in which all materials were presented concerning the needs of the total person. The report focused upon both vocational and behavioral factors that enabled the student to achieve a degree of maturity whereby he would be capable of satisfactorily fulfilling the requirements of entry level employment. It included recommendations of a social, medical, educational, vocational, and psychological nature. The recommendations were designed to alert those members of the professional community to the potential of each student and to how they might direct their efforts in order to maximize the functional capability of each student.

Other student groups were assessed during the summer months. The students evaluated were of school age and had handicapping conditions other than intellectual limitations. By introducing other population groups, the staff had an opportunity to assess techniques for administering work samples as well as an opportunity to examine the tasks to determine if they measured what they were intended to measure. The variety and challenge of a different population offered a stimulus to the staff.

The total effort of vocational evaluation was based on the student's functional ability to perform within the community. No effort was made to establish standards or norms for the population being evaluated. An attempt was made to establish performance ratings on the work samples.

The population being assessed would be assimilated within the community and society in general shortly after the termination of the educational pro-

gram. Therefore, any standardization (norming) would have limited, if any, value to those persons who were professionally involved with this select population. The important factor was function -- the ability to cope with activities of daily living and to achieve at least minimal success in employment.

The essence of a good vocational evaluation program lies in the continuity of the integrative ability of its services for the clientele served. The manner in which these services were planned and coordinated in each client's case determined the value and efficacy of that particular evaluation.

POPULATION AND SAMPLE

The population that was vocationally evaluated consisted of the entire 10th grade of students in the special classes for the intellectually limited within the Baltimore County school system. In the first year of the project 102 students were evaluated; 131 in the second year, and in the final year, 97.

The special education program was designed to meet the educational needs of those pupils that could not be met wholly or partially within the regular classroom. Flexible scheduling has been provided so that the particular needs of the individual pupil can be met. The basic purpose of the program is to help the pupils to achieve the fullest measure of self-actualization of which they are capable and to become contributing members of society. Pupils with intellectual limitations within the Baltimore County schools manifest identifiable characteristics such as (1) a general sub-normal intellectual functioning, (2) the presence of other handicapping disabilities, and (3) a reduced rate of intellectual growth resulting in difficulty in learning the formal material of the regular curriculum.

The Special Education Program

The focus of the special education program is on (1) the development of selected functional academic skills essential to areas of independent living; (2) development of personal, family, social, and civic skills; (3) development of work habits and work attitudes through a sequential instructional program, providing for individuality of developmental and remedial instruction. The 10th grade students were selected for vocational evaluation because at the age of 16, they were approaching employment age, and through this

curriculum were beginning to think in terms of their career potential.

The population of the 10th grade special class is typical of the educable mentally retarded student one finds in special classes. In regard to mental ability and adaptive behavior, the students in the special classes are sub-normal in intellectual ability and in the ability to adapt to new situations. Such a description of this type of student, therefore, indicates that the students in the special classes for the intellectually limited have a functional deficiency as contrasted to the students in the regular classes who are functional. Function is defined as "the natural, proper, or characteristic action of anything, any quality, trait or fact so related to another that it is dependent upon and varies with that other". More specifically, the special class students encounter difficulty in coping with the everyday activities of living and have impaired social skills. This is the result of some type of pathology or the absence of intellectual growth.

The Curriculum

In order to take advantage of the unique range of services available in the senior high school, the special classes for the intellectually limited are located in the comprehensive senior high schools as opposed to a special, isolated facility or building. The secondary special education curriculum allows for a combination of both regular and special classes to serve the student. The integration of the special student within the regular classes exposes him to situations whereby his social skills are expanded, he is identified as a member of a particular class (music, art, physical education, shop, etc.), and he is exposed to activities (varsity sports, work-study programs in school, etc.) other than those he would normally encounter if he remained in a special classroom all day, every day.

The instructional objectives of the secondary curriculum are directed toward the development of career potential within five major areas of competency:

1. Oral communication
2. Written communication
3. Motility - the ability and desire to move
4. Social competencies
5. Vocational competencies

These five major areas are considered to be of vital importance to the future lives of the students as productive citizens. They must be described as proficiencies that can be developed and evaluated as they are utilized within the classroom.

The teacher works with a curriculum guide which provides him with objective criteria for the observable behavior of the students. Observable behavior is that behavior which the student demonstrates after he has been exposed to a learning situation. During the process of vocational evaluation, the five areas of competencies are assessed and reported to the teacher and student. The reporting takes the form of (1) establishing areas of vocational potential and (2) listing those competencies in which assistance is needed to enhance the student's employability.

Using the Report

As an example, the report might indicate that the student has expressed an interest in working as a service station attendant. He also has demonstrated his ability to handle the mechanical aspect of the task and has appropriate work habits and attitudes. He is weak in the clerical aspects and has difficulty with change making and completing the credit sales tickets. This data,

when supplied to the teacher, offers guidance in the instructional program and establishes a motivational goal for the student. His classroom work becomes more meaningful now that it is related to a specific objective. The guidance counselor working with the data generated by the vocational evaluation might suggest a shop program that would expose the student to still another meaningful instructional area directly related to a vocational objective.

The vocational evaluation report focuses on a family of occupations rather than a specific job. The purpose of a report of this type is that it offers flexibility to the student in selecting an occupational goal. Today's labor market is fast moving and constantly changing, therefore, every effort is made not to categorize a student but rather to expand his potential for employment. The student may be recommended for a broad range of jobs within a specific occupational family that are compatible with his abilities, aptitudes, interests, and work behavior.

As the student moves along through the three years of senior high school, his program of instruction is planned to advance him from dependence to independence. The 10th grade is a time of self-assessment and vocational diagnosis. The student becomes more aware of his potential, and the services available to help him are now introduced and put into action. The 11th grade offers the student an opportunity to work within the school. The student may be assisting the custodian, helping in the cafeteria, or performing clerical work in the nurse's suite, the school office, the guidance office, or the library. The emphasis is on the development of appropriate work habits and attitudes. As the student

enters the 12th grade he is introduced to the community-centered work experience program. This is a program of a half day of employment and a half day of classroom work. The key person in this experience is the Job Development Coordinator, who acts as a liaison between the community and the classroom. He offers individual assistance to every student in the program so that the student is adequately prepared for the challenge and rigors of the job and the employer is aware of the potential of the student. As the student moves to the conclusion of his educational program, the counselor from the Division of Vocational Rehabilitation becomes more involved with him. The D. V. R. counselor not only functions within the school but is available when the student has completed his educational program and is without the emotional support and security of the school.

The special class student is in a unique position within the educational program. He is considered as an individual; therefore, the professional effort is directed toward helping him develop his individual potential to function independently in the community as a citizen and as a contributing member of society.

VARIABLES AND HYPOTHESES

This project was a demonstration project, and the effort of the staff was directed toward establishing curriculum guidelines and strengthening the overall educational programs for the intellectually limited student. In this demonstration project, the dependent variables were: (1) the student population within the special class, (2) the curriculum, and (3) change(s) that might be appropriate to introduce into the curriculum, both elementary and secondary.

The dependent variable was the service of vocational evaluation. A norm group was not part of the project schema. All tenth graders, for the three-year duration of the project, were included and their performance and behavior were considered (as it stood) on its merits. There was no attempt made to compare one group with another, to isolate any particular characteristic or trait, or in any way to have any individual or group appear different than any other. The total effort was to use the cumulative data as a resource in seeking ways to strengthen the curriculum and to initiate programs of instruction that would challenge and motivate the intellectually limited student.

The general hypotheses being tested were concerned with providing more specific direction for (1) individualized pupil instruction in the classroom, (2) pupil placement in in-school and community-centered work experiences and programs, (3) reduction in the dropout rate at age sixteen, and (4) vocational evaluation of vocational potential of those students who, for economic or other reasons, must leave school at the age of sixteen.

Since mobility allowed for consistency of assessment and since the service of vocational evaluation was made available to all tenth grade special education students for three years, some tentative conclusions can be made which will be discussed later.

DATA

The project a "Mobile Unit to Provide Vocational Evaluation for Handicapped Students" was a demonstration project, not a research project. Therefore, the data used in this Final Report is tentative and any conclusions drawn from this data should be interpreted with caution. As a demonstration project, the actual results (statistical) were not as important as were the guidelines for the direction and impetus for the educational program that the project offered.

The format for the project, being demonstration, did not provide for norm groups. All tenth grade special class students were evaluated during each of the three years of the project. As the students entered the project, biographical data was collected and test scores recorded. Each year that the student remained in school his class schedule was reviewed individually to chart his progress through the program and to determine whether any relationship existed between the recommendations of the evaluation itself and the ability of the school personnel to implement them.

Data was collected annually from the teachers of the special classes. The requested information caused the teacher to collaborate with the guidance counselor in reviewing the vocational evaluation report, since they were required to answer eleven questions (see Appendix A) that would indicate whether the recommendations were implemented. In effect, this procedure caused the two most vital people in the school system to joint together in a cooperative effort to review the student's progress over the past year.

An additional source of data was a questionnaire distributed in the final year of the project (see Appendix A). The purpose of this data

gathering effort was to alert the staff to the uses of vocational evaluation and the need to work with and implement the recommendations. This questionnaire was sent to all those members of the professional community who had some involvement with the project. This included principals, guidance counselors, nurses, teachers, job development coordinators, Division of Vocational Rehabilitation counselors, and pupil personnel workers.

The data to be collected was determined by several varying inputs. The supervisory staff of the Office of Special Education was interested in behaviors, therefore, an analysis of behaviors was introduced. A request was received and honored from a local college to participate in a research project to determine the relationship between standardized test results and job placements within a school age population. As a matter of course, all data collected during the process of evaluation itself was converted to quantifiable scores and recorded. All the efforts of data gathering were performed in accordance with directions from the Office of Educational Research of the Board of Education of Baltimore County, Dr. George T. Gabriel, Director. The project staff conducted an on-going, informal review of the data to (1) determine if any trends were emerging, (2) alert the supervisory staff of the Office of Special Education of instructional areas where inconsistencies or major deficits were noted, and (3) to review the results of the work samples attempted.

RESULTS

The results of the project had impact upon several sectors of the educational community: (1) the students and his parents, (2) the institution - the school system, (3) staff development - the inservice training of teachers, and (4) the curriculum for the intellectually limited student.

The significant results pertaining to each heading are listed below. The discussion portion of the report, which follows, focuses on the integration of the results into the total educational and career planning for the student.

Students and Parents

- Vocational evaluation provided students with data that allowed them to view themselves realistically.
- Self-esteem of the student was enhanced, since vocational evaluation was a special service available only to them.
- The students had an opportunity to view the world of work from a "hands on" viewpoint rather than the abstract classroom approach.
- The performance data revealed in the evaluation reports led to enrolling special class students in regular classroom subjects: industrial art, shop, music, etc.
- Vocational evaluation offered the student concrete, positive rewards. He could be considered for specific training in school, a job, or activities that were compatible with his ability and interest.
- Personal concerns were resolved and answers were found to questions such as, "Can I do it? Can I hold a job? What job is for me?"
- The students were able to consider themselves adults in an atmosphere that was positive, non-threatening, and encouraging.
- Follow-up one year after the evaluation indicated that the student had an understanding of himself and his potential.

- In vocational evaluation competition was minimal - emphasis was on individual progress and achievement.

- While vocational evaluation emphasized individual capabilities, it also created an interest and desire to establish career goals.

- Males were mostly interested in mechanical activities. Females were more interested in clerical activities. There was minimal interest in filing and power sewing.

- Parents approved of vocational evaluation and wanted it for their children.

- All special class students should have the same opportunties for training, if they are capable, as all other students.

- All students were interested in machines and/or mechanical activities.

Institution

- Mobility offered a uniform (consistent and standardized) service.

- The special student's esteem was raised by offering him individualized assessment and educational programming.

- Follow-up conferences forced the school staff to individually review each student's progress and plan to fulfill his needs.

- Vocational evaluation demonstrated that the capabilities of the special class student have been underestimated.

- Vocational evaluation should be available to all students.

- The generalization and stereotypes of the past continue to exist today in describing the special student and his capabilities.

- Faculty members were generally unaware of capabilities of the special class student and how he might apply his ability to effective functioning.

Staff Development

- Offered direction for teacher training.

- Created opportunities to implement career education concepts.

- Seminar workshops were initiated which gave a practical approach to teacher training.

- Developed an awareness of needs of other students through the vehicle of vocational evaluation reports and their suggestions of the types of services available.

- Emphasis on career education can be introduced more effectively to convince special subject teachers of the potential of educable mentally retarded students.

- Informed the school staff of community resources: Baltimore League for Crippled Children and Adults, Rosewood Rehabilitation Center, Sinai Hospital Rehabilitation Center, Maryland Rehabilitation Center, etc. where students with special needs might be served.

- Guidance counselors accepted vocational evaluation as a useful tool and asked help in working with EMR students, e.g., who should counsel, how to counsel, etc. They did not feel capable or prepared to deal with the particular needs and concerns of EMR students such as what vocations are available, training needed, community centers available, and how the student might be integrated within the school.

Curriculum

- Offered thrust and direction for planning a program for content, knowledge, and skill development prior to senior high school.

- Suggested the direction and need for revision of the elementary curriculum for the intellectually limited.

- Allowed for the introduction of the concept of "worker traits" into work situations within the classroom and the school.

- More occupational information is needed throughout the entire program - students need to know about occupations that are appropriate for them and be aware of their vocational capabilities.

- Indicated that vocational evaluation is a catalyst in job awareness and vocational training of the student.

- Showed that reinforcement of basic skills is needed at all levels of instruction, elementary through secondary.

DISCUSSION AND IMPLICATIONS OF RESULTS

In this investigation, the concept of mobility when applied to vocational evaluation was valid. The impact of a readily available service such as vocational evaluation in a large public school system was great. The degree of the impact may not be known for several years; however, the professional staff acknowledged the value of vocational evaluation.

There was no doubt at the outset of the project that vocational evaluation was suspect. Until the professional staff had time to review the process of vocational evaluation and explore in depth, at all levels, the concept, the methodology, the techniques, and the subsequent individualized recommendations resulting from the service, there was some obvious negative reaction to the service.

Impact Upon Students and Staff

As the mobile unit moved around the county, the tone of the staff toward the school personnel was one of cooperation and assistance, which eventually resulted in acceptance of vocational evaluation as (1) a component of the curriculum and (2) as an instrument for offering a unique, individualized service to the student. The previous year's evaluees looked forward to the arrival of the mobile unit and recognized the staff members immediately when the mobile unit arrived at the school. They supported and encouraged the present group of evaluees and related to them their experiences during evaluation. The students, once involved with the "hands on" activities of evaluation, and the positive dynamics of the staff, found it difficult to leave. Many of them requested an opportunity to return to the mobile unit after school, on weekends, or holidays.

The professional staff of the school was encouraged to hold meetings on the mobile unit, to seek out staff members as speakers, to be involved with allied professional groups to increase their understanding of vocational evaluation and its value to students. It was discovered as the project progressed that the majority of the professional staff involved with the evaluees had little or no exposure to occupations other than teaching. To expect a teacher to interpret the evaluative recommendations and implement them prior to the student becoming involved in a work experience was unrealistic. Using their experience acquired during the project, the staff organized a training program for teachers in August 1972. This workshop for teachers was of three-weeks duration - two weeks of job activity and one week of seminar. The teachers worked at the same jobs or ones similar to those their students usually engaged in as an entry level job. Through this training program teachers gained an understanding and empathy for the student and his situation that previously did not exist.

The value of vocational evaluation was more closely identified with vocational pursuits than with other curricula offerings. The vocational center and the vocational-technical schools indicated an interest in applying vocational evaluation to their activities. In the past the screening of candidates for vocational schools had been a problem. The school administration had requested the advisory services of the staff in planning and selecting a process whereby a more valid prediction of occupational potential might be reached than was possible through the more traditional methods.

Opportunity for Students

The total effect of those efforts had been, in essence, to open more

opportunities for the students from the special classes. If the teacher was more aware of the ability level of a special student and would offer individual assistance, the student's chances for success were greatly enhanced. In some instances, the regular class teacher felt uncomfortable with a special class student in his classroom. The frequency of these negative feelings was reduced through the efforts of the special class teacher and other professional staff members who used the vocational evaluation report as a reference in describing student capabilities and performance levels to the regular class teacher.

Concurrently, with improved teacher awareness has come curriculum revision related to those activities and learning experiences that help the student achieve a degree of independence and allow him to function in the community as a responsible citizen. On the primary and intermediate levels the curriculum was examined to see if modifications could be made in order to reinforce, at regular intervals, the basic skills that all students were taught and assumed to retain. The evaluation process indicated that the assumption of retention was not always correct and that counting, telling time, measuring, color identification, and other basic skills were not retained if not frequently reinforced. The curriculum focused on behaviors, and vocational evaluation assessed behavior. Therefore, the evaluation report became a teaching tool for teachers as well as a point of reference in staff development and other training programs for professional growth.

Impact Upon Families

The families of the evaluees were a part of the total project from the

beginning. Invitations were extended to the students' families to visit the mobile unit at every school visited. The staff met with P. T. A. groups and at specially convened gatherings of parents to explain the project and the implications of the service for their children. The parents have received this effort with enthusiasm. Their feelings were that a program of this type offered (1) incentive for the student to remain in school, (2) individual course selection in keeping with the student's capabilities, and (3) individualized work experiences when the student was ready for them and could gain the most benefit from an exposure to them. In effect, the parents became valued allies, since they interpreted the program as an attempt to individualize the curriculum for their children, with their special and unique needs.

Impact Upon Community

The industrial and business community demonstrated interest in the concept of evaluation by relying more and more on the recommendations based upon the demonstration of the student's performance and behavior during the vocational evaluation. The job development coordinator had a copy of the vocational evaluation report available to him and used it as a reference in matching the student to the job. Since the job development coordinator was knowledgeable both of the job requirements and of the student's needs, he was in a unique position to blend the two so that the employer and the student were both satisfied with the arrangement.

Within each local school, the conference to review the recommendations of the vocational evaluation served as an essential vehicle in communicating the concept of vocational evaluation. The conference brought together a

variety of professionals who influenced the direction of the student's educational program. Those involved were the student's teacher(s). The guidance counselor, the school nurse, a representative of the school administration, the counselor from the Division of Vocational Rehabilitation, the job development coordinator, the Special Education vocational counselor, the pupil personnel worker, and members of the vocational evaluation staff. A group of this size with their specialized expertise offered the student a type and degree of professional assistance that had unparalleled value. Most important, a team of this composition convened at every school the mobile unit visited during the year. The staff used these team meetings as an opportunity to generate an acceptance and understanding of vocational evaluation as well as to review individual performance.

THE IMPACT OF THE SERVICE UPON THE EDUCATIONAL COMMUNITY

The project attempted to show that a mobile system of vocational evaluation was a valid concept for the Baltimore County school system. At this time, the results of this effort are tentative. However, sufficient evidence was at hand to offer direction for the educational program. Although data was not available to support all of the conclusions, and some data could not be quantified, it was possible to state that a mobile system of vocational evaluation, operating in a large school system, provided a unique and valuable service to both the students and to the educational/professional community.

Educational Program

The mobility of the vocational evaluation made possible a service to the student that was (1) standardized, (2) consistent, and (3) uniform in administration, interpretation, and implementation. The process of teaching within the special education program took on new meaning for both the student and the teacher. The student recognized his own potential and was motivated to achieve now that he had a goal and was aware of the supporting services available to him. The teacher had a profile of the student from which to plan educational experiences. The total educational effort underwent a transition from the abstract to the concrete - the student attached meaning to his efforts and the teacher was aware of the individual strengths and weaknesses of the student. The teacher could offer an educational program designed to fulfill individual needs.

An expansion of service to students of the special class was made possible by the introduction of the mobile unit. Vocational evaluation

was available to a limited portion of the total population of the special class population. Students who received the service were clients of the Division of Vocational Rehabilitation and it was not feasible from a logistic and practical (time and distance) standpoint to serve the entire population of any class. The answer to this dilemma was to deliver the service to the student.

The staff of the mobile unit conducted meetings prior to the arrival of the mobile unit at the high schools in order to acquaint the faculty with the project. After the departure of the mobile unit, a review was made of the services available through the school system and the community that might benefit the students. Additionally, the supervisors of special education held individual conferences with the teachers to review the evaluation reports and suggest ways to implement the recommendations as well as to review the teacher's overall performance. The interaction of the team members at the follow-up conferences was of significance in communicating to the school faculty the total special education program, the community services, and the integration of the special class student within the regular curriculum. Most important, the attention that the project drew to the capabilities of the intellectually limited student was the most beneficial and vital aspect of the three-year effort. The image of the student improved and his status as an individual was enhanced.

Integrating the Service

When the project was initiated, the concept of vocational evaluation was an unknown entity to most of the professional community. A select few professionals had been involved with the evaluation. These were persons with a

special interest in the students in the special class; mostly teachers and guidance counselors. Of paramount concern to the staff was the introduction of the concept of vocational evaluation to as many professional personnel as possible. By using a technique whereby the concept of vocational evaluation was identified with existing school services and by indicating how it might supplement and expand upon existing data, the school personnel were able to identify and assimilate the new service into their mode of operation. Responsibilities were delegated to the individual members of the team so that, in effect, an accountability for service was achieved; the implementation of the recommendations of vocational evaluation became the individual responsibility of a particular person.

The introduction of the service brought to light some inadequacies in teacher training. Many teachers in the secondary schools offered skill training, rather than the integration of previously acquired skills into more meaningful pursuits. The special class student in senior high school needed an educational program that would assist him in becoming functional. An awareness of the community, the services available, the occupations available, and the ability to cope with the problems of everyday living was necessary for the special class student to be successful once he left school. Since the student learns by example, it was assumed that the special class teacher could benefit from community exposures similar to those experienced by the students. A summer workshop of three weeks duration was arranged in which senior high teachers were placed into jobs like those of the students. For two weeks the teachers rotated between three work experiences; the third week they devoted to a seminar where job specifications, tolerances, transportation, etc. were discussed and recorded. These data were compiled into

an organized form and distributed to all secondary teachers to be used as a reference. The thrust of the workshop was to involve the teachers with work experiences, to expand their knowledge of jobs, and allow them to gain an awareness of the possible job duties that a job title may or may not imply.

As the term of the project came to an end, it was obvious to those allied with the service of vocational evaluation that the concept was gaining in acceptance, not only at the level of the local school but also at the administrative level of the central office. Inquiries regarding the utilization of the service with varying population groups were received with increasing frequency. The staff maintained a schedule of public contact whereby an attempt was made to discuss the concept and service of vocational evaluation as often as possible. A member of the staff visited every senior high school that the mobile unit served, every junior high school that fed to a served senior high school, to all area principals' meetings, to P. T. A.'s when invited, to faculty meetings when invited, to teachers' meetings called by the supervisor, and at state gatherings sponsored by the Division of Vocational-Technical Education for the specific purpose of having several school systems of the state accept and expand the concept and service of vocational evaluation. The State Department of Education attempted to bring together representatives of the professional disciplines of guidance, administration, special education, pupil services, etc., at least once a year to discuss the progress of the service of vocational evaluation and review with the responsible parties within each of the counties served the merits of the service, the implications of it and how it might be utilized advantageously with additional population groups - adult education students, Vocational

Rehabilitation clients, and candidates being screened for vocational training programs.

The results of the project may be generalized as follows:

1. The student saw, and was aware of a broad spectrum of jobs. This was in contrast to the traditional method of job selection, namely, the parents' pattern of employment.

2. There was a certain prestige offered the student by availing himself to the service. Vocational evaluation was a unique service available to a select few students. They received personal instructions and, in return, received an educational prescription attuned to their individual needs.

3. The service integrated the student into the school and community. The follow-up conference was the vehicle by which those vital faculty members were drawn together to discuss the potential of each student evaluated. This opportunity afforded the staff the privilege of exposing the positive qualities and potential of a relatively small segment of the population who were considered "different" yet possessed untapped potential.

4. The service and reports offered constant reinforcement to the school faculty and the professional community information regarding the capabilities of the students and the educational programs that were appropriate for them. Information of this type, readily available, generated an interest in the welfare of the intellectually limited student to the point that he was considered for admission to regular classes, vocational training programs, school shops, home economics classes, and other educational activities that would not necessarily have been open to him otherwise.

5. The service, operating in most of the senior high schools of the county, offered the Office of Special Education an opportunity to discuss and make available other services that might benefit students in regular classes. Again, the follow-up conference was the vehicle whereby discussion was generated and the school faculty was made aware of the various services available in addition to those usually associated with the special class, i.e., language, communication, behavior and learning, and physical disabilities.

6. The student's concept of space was expanded as a result of participation in the project. He began to think in terms of areas and activities beyond his neighborhood and his school. The exposure to activities and situations different from those he was accustomed to generated an awareness of the community that he was not conscious of before. His thinking moved from the neighborhood, the school community, the local region, and the county to the metropolitan area and a broader area that might encompass one or several states.

7. The service also provided a continuity of educational programming. We are living in a mobile society in which people frequently change jobs, communities, and schools. The vocational evaluation report, traveling with the student to his new school, offered the new teacher an assessment of the student's present level of functioning and gave direction that would enable the student to achieve a degree of success that he might not reach if his changes of residence were frequent and he was without benefit of a service of this type.

8. The total special education program benefited from the project. The fact that the project offered standardization, consistency, and uniformity of assessment, reporting, and interpretation of results demonstrated the strengths and weaknesses of the program. As a result, an on-going analysis of the program, K - 12, has been initiated; inservice training of teachers was more pragmatic and meaningful; the relationship between the school and community resource agencies had been strengthened; cooperation between the several professional disciplines within the school had been expanded and supplemented by the utilization of the service.

9. The integration of the concept of vocational evaluation and career development was a real possibility. As the utilization of vocational evaluation proceeded throughout the school system, it became evident that the use of evaluative techniques was appropriate and could be implemented within the framework of the career development model.

10. Within Baltimore County, additional vocational evaluation services are now available as a direct result of the mobile unit. (1) The Turner Occupational Training Center, a facility designed primarily for trainable youth who demonstrate a potential for independent activity, uses vocational evaluation and personal/work adjustment services as integral components of the program. (2) The Western Vocational-Technical Center will incorporate a packaged system (commercially available) of vocational evaluation as a component of their Career Resource Center. The Center will include evaluation, a resource lab, and guidance and health services in one location, primarily for the use of students who are considering the high school as a training site to supplement their senior high school program. (3) In response to a similar need, vocational evaluation will be incorporated into a total school program in the Eastern Vocational-Technical High School.

11. The project was planned and submitted approximately two years prior to approval. During the interim, the national economy began to expand and inflation negated many of the cost factors shown in the original project proposal. An appeal was allowed and a ten percent increase was applied to the original cost estimates. The allowed increase was helpful but it was not enough to cover the accumulated cost increases (salaries and software) for the duration of the project. The Federal government granted only that amount requested

in the original proposal, plus ten percent ($81,840); it appeared that the project would operate at a deficit. The situation was presented to the Superintendent of Instruction and the Budget Officer of the Board of Education. Provisions were made to supplement the Federal funds with county funds during the second and third years of the project. The facilities of the Board of Education were used extensively during the three-year period. County services were rendered to move the mobile unit, maintain the mobile unit (exterior and interior), provide electrical service, repair and replace tires, wheels, drums, etc., provide office space, equipment, furnishings and telephone service to the mobile unit staff, and maintain many other services that required the efforts of various offices within the Board of Education.

12. The Board of Education determined that the service of vocational evaluation was an integral part of the educational program. It elected to retain the service and continue to make it available to those who might benefit from it.

13. An obvious need for trained evaluators emerged. Meetings of evaluators (VEWAA and school centered) are held at least semi-annually. The purpose of these professional meetings is to discuss topics of mutual interest and coordinate these efforts to establish cooperation among similar units of evaluation. It became apparent in Maryland, that a training program for evaluators was needed. There is no uniformity of training or experience among the evaluators. All have had some type of training, all have had some experience that might be related to their present occupation, but none have been exposed to a formal educational program that is directly associated with evaluation. With the expansion and availability of vocational evaluation in Maryland, a formal program of training is urgently needed.

14. From the exposure to the service of vocational evaluation and from a working knowledge of the recommendations and their subsequent implementation, the staff observed that more and more educators are indicating a need for the service to be made available to all students who request it, not just those who are considered to have special needs.

15. The plans and prototype of the Baltimore County mobile unit has provided the impetus for similar evaluation units throughout the state. The State Department of Education, Vocational-Technical Division, offered technical and financial assistance to other counties within the state, and three similar units were made operational during the 1970-71 school year. Basically, the mobile units are forty feet long, ten feet wide and house the TOWER System. From this introduction of vocational evaluation within Maryland, the service grew to include several permanent sites within schools, and is available at all the state hospitals, juvenile service facilities and in many private agencies.

SUMMARY

Vocational evaluation filled a void that traditionally existed in educational programs to serve the mentally limited student. It was an objective assessment of work behavior and career potential. It removed the student from the abstract atmosphere of the classroom and placed him in a reality-oriented setting of a work environment. This environment caused the student to perform. He saw tools, machines, and equipment that he wanted to handle, use, and perform with. Once he was stimulated and guided, his performance could be measured. The measurements of performance were conveyed to the professional staff of the school in functional terms so that the student was encouraged to develop his unique potential.

Within the Baltimore County school system, mobility was the key to serving a segment of the total population that needed specialized assistance. In order to assist a student, his needs must first be understood. Vocational evaluation revealed the student's vocational strengths and weaknesses. The recommendations were such that the student could be adequately served so that he functioned more independently in society. More important, mobility of evaluation offered an assessment of the curriculum and of staff development needs. Mobility offered a continuity of programming and communication. The professional community was drawn together as a total unit in serving the student as a result of the conference, bringing many disciplines together for a common purpose.

For the community outside the school, the factor of mobility placed the service before the public in surroundings that were familiar to them. Since evaluation offered individualized service, the community saw the public

schools as attempting to serve the individual student according to his needs. The business sector viewed the concept of vocational evaluation as a beneficial service to them because they were appraised of a prospective employee's qualifications as a worker before they hired him. The trial and error placement was minimized.

This project has proved beneficial not only to the students but to the professional staff of the school community as well as the business and industrial sector of Baltimore county.

BIBLIOGRAPHY

Association of Rehabilitation Centers, Inc. Work Evaluation in Rehabilitation. Materials Development Center, Stout State University, Menomonie, Wisc.

Baltimore County At A Glance - 1970. Baltimore County Office of Information - Research, E. Jay Miller, Director. Towson, Maryland

Baltimore County Population - 1971-1972. Baltimore County Office of Planning and Zoning, George E. Gavrelis, Director. Towson, Maryland

Clemons, Roger W. A Mobile Work Laboratory. Vocational Evaluation and Work Adjustment Bulletin, Vol 1, Number 2, Spring, 1968, pp. 9-10

Couch, Robert H. & Brabham, Robert E. Evaluation Staff Conference. Vocational Evaluation and Work Adjustment Association Bulletin Vol. 3, Number 3.

Cromwell, Florence S. Primary Vocational Evaluation. United Cerebral Palsy Association, Los Angeles County, September, 1960.

Division of Vocational Rehabilitation, State of Rhode Island. Preventive Rehabilitation, A Promise for the Future. R & D Grant RD-1126, July, 1968

Dunn, Dennis. Work Adjustment, Work Evaluation and Employability. Vocational Evaluation and Work Adjustment Association Bulletin Vol. 4, Number 2, June, 1971, pp. 11-15

Experimental Manpower Laboratory at Mobilization for Youth, Inc. The Work Sample - Reality Based Assessment of Vocational Potential. Manpower Administration, Contract No. 82-34-69-21

Gannaway, Thomas W. Occupational Exploration: A Neglected Element in the Voc Eval Process. Vocational Evaluation and Work Adjustment Association Bulletin, Vol. 5, Number 2, June, 1972, pp.7-10

Handelsman, Robert D. and Wurty, Robert E. The Validity of Pre-Vocational Evaluation Predictions in a Community Workshop. The Journal of Applied Rehabilitation Counseling, Vol. 1, Number 1, Spring 1971, pp. 16-21

Hardy, Richard E. Use of Background Information. Vocational Evaluation and Work Adjustment Association Bulletin, Vol. 3, Number 1, January , 1970, p. 3

Hiten, Hollis. Viewpoints on Vocational Evaluation. Special Technical Facility of the Department of Adult Blind and Deaf, Talledga, Alabama, 1970

Hoffman, Paul R. An Overview of Work Evaluation. Journal of Rehabilitation, Vol. 36, Number 1, January-February, 1970, pp. 16-18

Institute for the Crippled and Disabled. TOWER Testing. Orientation and Work Evaluation in Rehabilitation. New York: 1959

Jewish Employment and Vocational Service. Work Samples - Signposts on the Road to Occupational Choice - Final Report.

Jones, Edna & Peterson, Richardson O. Guide to Jobs for the Mentally Retarded (Revised Edition). American Institute for Research, Pittsburgh, Penna.

Krantz, Gordon. Critical Vocational Behaviors. Journal of Rehabilitation, July, August, 1971, pp. 14-16

Marchman, Richard. A Mobile Work Laboratory. Vocational Evaluation and Work Adjustment Association Bulletin, Vol. 1, Number 2, Spring, 1968, pp. 9-10

Nadolsky, Julian M. Development of a Model for Vocational Evaluation of the Disadvantaged. Research Grant No. 12-P-55140/4-01; Social and Rehabilitation Service, Department of Health, Education and Welfare, Auburn University, September, 1971

_____. The Effective Use of Evaluation in Rehabilitation. The Journal of Applied Rehabilitation Counseling, Vol.3, Number 1, Spring, 1972, pp. 10-18

_____. The Existential in Vocational Evaluation. Journal of Rehabilitation, Vol. 35, Number 3, pp.22-24, May-June, 1969

Neff, Walter F. Work and Human Behavior. New York: Atherton Press, 1968

Opportunity Center, Inc. A Work Experience Program for the Mentally Retarded In Their Last Year In School. Project Number RD-1675

Redkey, Henry & White, Barbara. The Prevocational Unit in a Rehibilation Center. Materials Development Center, Stout State University, Menomonie, Wisc.

Smith, Frank. A Rehabilitation Counselor's Model for Work Evaluation Report. Journal of Applied Rehabilitation Counseling, Vol. 2, Number 4, Winter, 1971-72 pp. 191-193

U. S. Department of Commerce. Census Tracts - Baltimore, Maryland; 1970 Census Population and Housing, April 1972, Publication PHC (1) - 19, Social and Economic Statistics Administration, Bureau of the Census

U. S. Department of Health, Education and Welfare, Vocational Rehabilitation Administration. A Training Guide: Guidelines for Organization and Operation of Vocational Evaluation Units. Rehabilitation Service, Series Number 67-50, May, 1966

U. S. Department of Labor. Dictionary of Occupational Titles. Third Edition Vol. 1 & 2, Supplement 1966 & 1968.

Villemarette, Julius M. The Many Dimensions of Voc Eval. Vocational Evaluation and Work Adjustment Association Bulletin Vol. 3, Number 3

The description of the educational program is more fully discussed in the following publications:

A Guide for the Secondary Program for Classes for the Educable Mentally Retarded, Special Education Department, Board of Education of Baltimore County, Maryland 1964
(Developed under the direction of Miss Edna T. Warwick in a summer workshop by teachers in the secondary program, Summer, 1964.)

A Supplement to A Guide for the Secondary Program for Classes for the Educable Mentally Retarded, Junior High School, Special Education Department, Board of Education of Baltimore County, Maryland: 1968
(Also developed under the direction of Miss Edna T. Warwick in a summer workshop by teachers in the Junior High School program.)

An Educational Vocational Rehabilitation Program for Handicapped Pupils.
(Federally and State approved project.)
Dr. Davis developed this description of the program now in operation.

The Community Work-Study Program, Special Education Department, Board of Education of Baltimore County, Maryland: 1967

A P P E N D I X

Descriptions

Characteristics

Work Samples

Forms

Follow up

JOB DESCRIPTIONS

The Special Education Teacher

The special education teacher must observe the individual differences and use these differences to promote the highest development of the individual pupil. The teacher's creative ideas and innovations to the curriculum are essential if the daily classroom instruction is to help the pupils meet the challenge and problems facing them in their educational experience. Thorough and complete records of the pupils are essential if accurate reporting and evaluation of the program is to be maintained.

The Job Development Coordinator

The job development coordinator has three responsibilities in the Community Centered Work Experience Program. The primary responsibility is to coordinate the activities of special education pupils actually engaged in community-centered work experience programs. A secondary responsibility is to coordinate resources of community agencies which are concerned with pupil work experience programs. Finally, the job development coordinator must identify potential work experience opportunities in the community and communicate information about these to the special education teacher and pupils.

The Pupil Personnel Worker

The pupil personnel worker assists school personnel in studying specific cases on a broader scale through knowledge of and contacts with the home, community, and other schools. The pupil personnel workers serves as direct liaison between the home and many community resource agencies as the result of team interaction.

The School Counselor

The school counselor reviews and presents comprehensive school information including observations vased upon counseling contacts on all appropriate cases. The counselor presents information and observations relative to cases being presented by other members of a team and works on a counseling basis with selected students who are scheduled for team conference.

The School Nurse

The school nurse assists staff members in adapting the school program to meet the health needs of students. Appraises and reports on the health status of students by screening test results as well as the health of the family unit. The school nurse serves as liaison between school and community health agencies and the medical profession, updates and obtains pertinent health data and interprets findings and recommendations to faculty and other administrative personnel.

The School Psychologist

The school psychologist determines the adequacy of information from which

reasonable conclusions can be drawn regarding the psychological well being of the students. The school psychologist evaluates the usefulness of and the need for psychological testing. Clarifies and interprets psychological data and appraises the team of progress and/or regression of students under his direction who are receiving therapy, counseling, and other modifications of behavior.

The Vocational Special Education Counselor

The vocational special education counselor works cooperatively with vocational-technical, regular subjects teachers, and guidance counselors to aid in programming for special education students, supplies job information to special class teachers, i.e., job specifications for job profiles, works with in-school work experience program as a consultant, acts as liaison with the vocational technical high schools and centers and the Department of Special Education, and interprets special education vocational education programs (curriculum and work experiences) to the community and related agencies.

The Vocational Evaluator

The vocational evaluator develops and directs all vocational evaluations, gathers data from all sources concerning clients and distributes written reports to all indicated sources. The vocational evaluator must keep abreast of new innovations in the labor market, in the community, and in the country, and must originate conferences with clients, parents, school personnel and ancillary services.

The Vocational Rehabilitation Counselor

The vocational rehabilitation counselor works with the job development coordinator and other special education personnel in developing a comprehensive and coordinated program which will enable all elibible students to benefit to the fullest extent from the rehabilitation services offered by the state.

Office of Special Education
Board of Education of Baltimore County
Towson, Maryland

Program for Children With Intellectual Limitations

- An Overview -

Placement Procedures:

1. Referrals are made from the home school to the Office of Special Education. This is done as a result of discussion at a team conference.

2. Criteria:

   a. I.Q. range between 50 - 79 as measured on an individual test administered by a school or private psychologist.
   b. Written permission has been obtained after a conference has been held with the parents by the principal or his designate.

Placement Opportunities:

1. Programs are available for these children from primary through senior high school.

Primary	Age 6 - 9
Intermediate	Age 10 - 12
Junior High	Age 13 - 15
Senior High	Age 16 - 18

2. The size of classes is:

   Primary - 10 students
   Intermediate - 15 students
   Secondary - 20 students

3. If the home school does not have a program, assignment is made in a nearby program. Special transportation is provided by the county.

Curriculum

The program emphasis is placed on preparation for independence in society and the working world. Developmental programs in basic skills are emphasized in the elementary program with emphasis on individual needs. As the child develops reading, computational, and other communication skills, life like concepts are introduced so that basic school skills are translated into use in life like settings.

Preparation for a career is started early in the school years but with heavier emphasis in the secondary program. In the junior high school, job clusters are explored and job analyses are written that are realistic to the students. In-school work experiences are provided so that the student can better realize his interests and abilities. In the 10th grade, the students receive a vocational evaluation, followed by the Community Work Experience Programs in the 11th and 12th years.

Program Innovations

The history of this program is short compared to public education in the United States. In this brief time, programs have gone through many changes. Twenty years ago in the United States, many intellectually limited children were still isolated in homes away from society and schools were starting "isolation booth" program separate from the regular school. Today, the intellectually limited individual is mingling in society and has a role in the working world. Schools are attempting

to integrate these students in total school programs based on the individual abilities. Employers are hiring these people for their work potential and not for the humantarian approach of hiring the handicapped.

At the present time, Special Education programs through the country are spearheading Career Education programs and facilities that are needed for a larger segment of our population. This has been implemented by government funding designated for the handicapped. Baltimore County continues to provide a program for these students that has for years been considered one of the outstanding programs in the country.

VOCATIONAL EVALUATION PROGRAM

Statement of Purposes and Procedures

RATIONALE:

The total effort of vocational evaluation attempts to reveal what the student has done in the past, what he can do now, and what he has the potential for doing in the future. All aspects of the total student are considered; his family, his education, his medical background, and his social experiences.

The evaluation is an individual assessment based on a flexible structure in consideration of individual needs. It offers an exposure to work situations, whereby the student becomes aware of himself as a worker and of jobs as he performs specific occupational tasks.

The student with intellectual limitations needs positive, concrete examples of work activities. These activities must be meaningful to him and he must be able to relate the activities to familiar everyday encounters. By using actual work samples in a simulated employment environment, the student's performance can be measured. The work situations and families of occupations incorporated within this system are those in which the student with intellectual limitations has met with occupational success.

From past experience, students have lost jobs, not due to lack of skill, rather, due to poorly developed interpersonal skills. Therefore, students are rated on both work and personality characteristics. This data is vital to the helping community in preparing a student for employment. The effort of the school staff and the surrogate employer are focused on developing a positive work attitude and on fostering appropriate work habits.

The assessment is dynamic and ongoing. Therefore, as a component of a curriculum, it can provide direction for the student, the school staff, and those members of the helping community who are needed to assist the student in becoming functional as a worker and a citizen.

BOARD OF EDUCATION OF BALTIMORE COUNTY
TOWSON, MARYLAND 21204

Vocational Evaluation Program

OBJECTIVE: The assessment of career potential and work behavior.

POPULATION: 10th grade students in the special classes for the intellectually limited.

PROCEDURES:

1. Psychometrics

   a. Standardized tests
      - Picture Interest Inventory
      - Crawford Small Parts Dexterity Test
      - Bennett Hand Tool Test
      - Revised Beta Examination

   b. Basic Skills
      - Business arithmetic
      - Change making
      - Color identification
      - Counting ability
      - Job application
      - Lettering
      - Measuring
      - Size discrimination
      - Tool knowledge
      - Telephone directory

2. Work Samples *

   Assembly work
      - Stapling and stapling
      - Nut, washer and bolt assembly

   Clerical work
      - Adding machine
      - Calculator
      - Cash register
      - Checking & coding
      - Duplicator
      - Filing - alphabetical, chronological & code
      - Mail clerk - departmental, zip, folding, inserting, opening, dating, sealing, and postal scale
      - Sales book
      - Stock clerk
      - Typing

* The work samples employed are based upon samples taken from the TOWER System, other facilities offering vocational evaluation, and from actual job opportunities that are available to intellectually limited students.

Shop work
Drill press
Pattern layout, use of power machinery

Electronics
Assembly, sorting resistors, sorting wires, code identification, cable harness, inspection, soldering, use of test meter

Electrician's helper
Rat-tail splice, basic wiring

Power sewing

Mechanical work
Lock
Lawn mower assembly
6-cylinder motor (automobile)
Gapping spark plugs
Use of manual

Structural trades
Bricklaying
Carpentry - Sanding block, [illegible] rack, bird house, wall shelf

Service work
Custodial
Food service - Table setting, stacking dishes, measuring solids and liquids, following a recipe
Nurse's aide - Use of a thermometer, taking a pulse, use of patient chart, interest questionnaire
Cosmetology - Use of rollers, brush, comb, styling hair
Waiter/waitress
Service station attendant

The entire TOWER System is available and is utilized as the individual demonstrates potential in a specific occupational area.

3. Critical Observations
(See attached sheets listing personality characteristics and work characteristics.)

4. Reports
The reports focuses on areas that will enhance the student's chances for success as a potential worker and citizen.

Structured work experience
in-school
community centered
Vocational training
Remedial instructional programs
Adjustment services
work
Personal

Ancillary services
- medical
- social services
- psychological
- counseling

Occupational recommendations are bases on entry level activities within specific families of occupations that include a broad range of job alternatives.

INDIVIDUAL CHARACTERISTICS OF THE 330 STUDENTS VOCATIONALLY EVALUATED DURING THE THREE YEAR TERM OF THE PROJECT.

SEX	Male Female		211 119
RACE	White Black Oriental Other		270 59 1 0
AGE	Range Mean At time of Evaluation	15 - 3 to 15 - 11 16 - 9 " 15 - 3 to 15 - 11 16 - 0 " 16 - 11 17 - 0 " 17 - 11 18 - 0 " 18 - 11 19 - 0 " 19 - 8	 25 220 69 13 3
HANDICAPPING CONDITIONS 122 students had one or more disabilities in addition to mental retardation		Vision Hearing Speech Orthopedic Emotional Neurological Epileptic Dental Other (allergy, diabetes, respiratory, obesity)	27 20 23 17 13 3 15 2 27

The recommendations resulting from the vocational evaluation indicated that students might benefit from the following services:

In-school work experiences	53%
Community centered work experiences	23%
Vocational training	37%
Full or part time employment	9%
Personal or work adjustment training	43%
Basic Education	53%
Regular education	27%
Medical Services	23%
Social Services	3%
Psychological Services	35%
Counseling Services	49%
Reevaluation at a later time	21%

Prior to being vocationally evaluated, the students expressed an interest in one or more of the following vocations:	
Mechanical	66
Clerical	58
Carpenter	49
Service Worker	26
Electrician	19
Cosmetologist	7
Food Service Worker	7
Drill Press Operator	6
Auto Mechanic's Helper	5
Jewelry Manufacturing	5
Nurse's Aide	5
Professional Athlete	5
Custodial Worker	4
Sales Work	4
Bricklayer	3
Body and Fender Repairman	3
Child Care Worker	3
Construction Worker	3
Cashier	3
Computer Operator	3
Stock Clerk	3
Power Sewing Machine Operator	3
38 additional choices not shown were selected by 1 or 2 evaluees.	

WORK SAMPLE DESCRIPTIONS

I. Assembly Tasks

Two basic assembly tasks are utilized, a sorting and stapling task and a nut, washer and bolt assembly.

A. Sorting and stapling: The student places one large and two small screws into each of 175 envelopes and then staples them closed while being timed.

B. Nut, washer and bolt assembly: In this test, the student has to perform at a higher rate of speed when making the required assemblies which consist of one bolt, one lock washer and a second nut. His potential for placement in various types of small assembly and packing positions can be assessed through the utilization of these particular tasks.

II. Clerical Samples

The clerical segment consists of 13 basic work samples which measures one's aptitude and potential for performing various types of clerical work.

A. Adding machine: This is a TOWER System work sample in which the student has to work with multiple digit numbers, operate an adding machine, and complete a bookkeeping sheet accurately and rapidly. It relates to many clerical positions in industry.

B. Calculator: The student is asked to perform four types of mathematical operations on a Singer-Friden 1115 electronic calculator - addition, subtraction, multiplication, and division, following the formulae provided.

C. Cash register: In this sample, the student is asked to operate a standard cash register accurately, compute the cost of a food order with the aid of price splitting and sales tax charts, discriminate between taxable and non-taxable items and make correct change.

D. Checking: This is a sample designed to measure the student's ability to check and compare columns of figures and names with another list to determine whether or not errors exist.

E. Coding: The student is asked to learn simple number and letter codes and apply these to columns of names, using the appropriate code.

F. Filing: The student is required to complete three types of filing, alphabetical, chronological, and code filing; a total of 900 3" x 5" index cards, 300 of each type.

G. Alphabetical folder filing: This is a more sophisticated alphabetical filing task in which the student has to file 100 folders containing many of the rules of filing such as hyphenated names, abbreviations, etc.

H. Mail clerk: The evaluee has to perform six separate tasks in this sample, opening mail, date stamping, folding and inserting mail, sealing mail, sorting by departments and zip code, weighing mail, and using a postage scale.

I. Payroll: This is a TOWER System sample in which the student is required to prepare a relatively simple payroll record. One

determines the number of hours worked by each employee during the course of a week and computes the salary according to the hourly rate of pay.

J. Sales books: This is a TOWER System task in which the evaluee has to make out multiple copy sales slips similar to those used in department stores, using a sales tax chart to compute the tax.

K. Stock clerk: The student is asked to fill an order following a written order form, take inventory, using a standard form, weigh various items and shelve stock.

L. Typing: This sample is designed to measure a person's potential to learn manual touch typing. The student is given a minimum of one day of practice and is tested on three three-minute trials, and types designated material.

M. Telephone directory: The purpose of this task is to measure the student's ability to use a telephone directory. He is asked to look up 25 names and record the telephone numbers on a work sheet.

III. Service Samples

A A. Cosmetology: This task is designed to measure a student's interest and aptitude in personal service types of work. One is required to produce a particular hair style following a printed design and create an original one using the tools of the trade such as brush, comb, rollers, etc.

B. Food service Three main samples are used in the food service

area; table setting, stacking dishes and measuring solids and liquids following a recipe. In the table setting sample, the student is asked to set a table following a specific pattern, using knives, forks, spoons, etc. In the second part, the student stacks dishes in a dish rack as rapidly as possible. In the last part, the student has to read a recipe and measure specific amounts of solid and liquid ingredients using standard measuring devices such as measuring cups, measuring spoons, etc.

C. Janitorial: The student is asked to perform basic custodial duties such as sweeping and vacuuming the trailer, emptying trash containers, and waxing table tops.

D. Nurse's aide: In this series of tasks the student has to complete an interest questionnaire, read an actual thermometer, take a patient's pulse and complete a patient chart. The student's ability to relate and communicate with people is also assessed through observation.

E. Service station attendant: There are two basic parts to this sample. In the first, the student has to complete a credit card form properly, copying specific information from a printed sheet. He then uses a standard imprinter to record the information in the upper part of the form. In the second segment, the student has to use a tire pressure gauge, battery tester, and anti-freeze tester in an actual automobile.

F. Waiter/waitress: This sample involves taking orders directly from a customer, completing sales checks accurately, and using a sales tax chart. The student's ability to communicate with and relate

to people is observed.

IV. Manipulative Tasks

There are a total of 13 separate samples in this area.

A. Bricklaying: In this sample the student lays bricks according to several specified patterns; a standard running bond and a Flemish bond, and he has to lay a corner.

B. Carpentry: The carpentry ares are sub-divided into four separate samples and the student gradually progresses from a simple task to more complex ones. The four samples are making a sanding block, a tie rack, a bird house and a leaf wall shelf. The student uses diagrams and all essential tools including hand and power tools. Two types of wood are used; pine and plywood.

C. Drill Press: In this sample the student has to lay out two patterns on plywood sheets following a diagram and then drill them accurately and precisely using a standard drill press.

D. Electronics: This segment consists of seven separate work samples, resistor sorting, wire sorting, coding, laying a cable harness, inspection, soldering terminals, making a rat-tail splice, and completing wiring of a terminal box.

Resistors: In the resistor sorting task, the student has to sort 100 multi-color resistors of 10 different color combinations into bins.

Sorting wires: This a standardized TOWER System task in which one has to identify 10 wires and color code them.

Cable harness: In this TOWER System task the student has to run a small cable harness of 10 solid color wires following a diagram.

Inspection: In this TOWER System task, one has to complete a cable inspection, i.e., inspect his own work on the cable harness for errors.

Soldering: The student has to solder 24 wires to standard terminals with a soldering iron.

Rat-tail splice: The student makes a simple splice following certain measurements and using 18 gauge wire.

Terminal box: The student is asked to cut, strip, and attach 20 wires to the screws on a terminal box using basic electrician's tools such as needle nose pliers, stripper and cutter.

V. Mechanical Tasks

The mechanical phase consists of six basic samples; lock, electric motor, lawn mower, 6-cylinder automobile engine, spark plug gapping and using a service repair manual.

A. Lock: The student disassembles and reassembles a standard house lock using a screwdriver.

B. Electric motor: The student assembles and disassembles a small electric motor following a simple diagram.

C. Lawn mower: The student is required to disassemble and reassemble this more complex motor using a diagram and ordinary mechanics' tools.

D. 6-cylinder automobile engine: In this more sophisticated task, the student disassembles and reassembles a standard 6-cylinder automobile engine following minimal instructions and using a wider variety of mechanics' tools.

E. Spark plugs: The student makes six different gaps following

an instruction sheet and using a standard gapping tool.

B. Manual: In this sample the student is asked to read a service station manual and use various charts to locate and read specific information about different models of automobiles.

WORK CHARACTERISTICS

NAME_____ SCHOOL_____ DATE_____

(Check the ones that apply)

1. Ability to analyze and reason. Can reason_____ Cannot reason_____
2. Attention span and work tolerance. Nearly always completes tasks_____ Completes at least one-half of the tasks_____ Several_____ None____
3. Cleans up work area. Nearly always_____ at least one-half of the time_____ occasionally_____ never_____
4. Cooperation. Cooperates nearly always_____ at least one-half of the time_____ never_____
5. Dependability. Is nearly always dependable_____ at least one-half of the time_____ occasionally_____ never_____
6. Enthusiasm. Is nearly always enthusiastic_____ at least one-half of the time_____ occasionally_____ never_____
7. Flexibility. (Willingness to try new tasks). Nearly always flexible _____ at least one-half of the time_____ never_____
8. Grooming. Nearly always well groomed_____ at least one-half of the time_____ never_____
9. Initiates own tasks. Nearly always_____ at least one-half of the time_____ occasionally_____ never_____
10. Maturity. (in relation to group) Above average_____Average_____ Below average_____ Not at all mature_____
11. Neatness. Nearly always neat_____ Neat at least one-half of the time_____ occasionally_____ never_____
12. Perseverance. Perseveres almost always_____ at least one-half of the time_____ occasionally_____ never_____

WORK CHARACTERISTICS

13. Punctuality. Usually punctual_ _ _ _ at least one-half of the time_____ occasionally_____ never_____

14. Quality of work. Above average_____ Average_____

15. Reaction to frustration and stress. (When things are not going well) Stops working _____ Substantial change in production_____ small decrease in production_____ no decrease_____ not applicable_____

16. Returns from breaks (without being reminded) Nearly always_____ at least one-half of the time_____ occasionally_____ never ____

17. Safety instructions. (Follows them) Always_____ at least one-half of the time_____ occasionally_____ never_____

18. Seeks help. Nearly always_____ at least one-half of the time_____ occasionally_____ never_____

19. Supervision. Nearly always needs supervision_____ one-half of the time_____ never_____ specify_____

20. Thoroughness. Nearly always thorough_____ one-half of the time____ occasionally_____ never_____

21. Verbal instructions. Nearly always retains and follows verbal instructions_____ occasionally_____ never_____

22. Work attitude. Is nearly always positive_____ positive at least one-half of the time_____ occasionally_____ never_____

23. Work improvement with experience. Improves rapidly_____ improves at a fairly rapid rate_____ improves slowly but gradually_____ shows little improvement_____

24. Work speed. Always rapid_____ acceptable at least one-half of the time_____ occasionally_____ not acceptable_____

WORK CHARACTERISTICS

25. Written instructions. Can follow them_____ cannot follow_____

26. Emotional stability. Good_____ fair_____ Poor_____ unsatisfactory_____

27. Self-confidence and self-concept. Excessive_____ adequate_____ inadequate_____.

PERSONALITY CHARACTERISTICS

NAME_____ SCHOOL_____ DATE_____

1. Is well motivated_____. Is poorly motivated_____.
2. Relates well to peers_____. Occasionally relates to peers_____. Does not relate or interact_____.
3. Relates well to authority figures_____. Relates occasionally_____. Does not relate or interact at all_____.
4. Relates best to men_____. women_____. both sexes equally well_____.
5. Works best with others_____. alone_____.
6. Does not need encouragement_____. Needs support and encouragement occasionally_____. Needs support and encouragement continuously_____.
7. Is methodical_____. Is hasty and impulsive_____.
8. Has good social skills_____. Has poor social skills_____.
9. Is well oriented_____. Is disoriented_____.
10. Is hyperactive_____ . Is somewhat hyperactive_____. Is emotionally stable_____.
11. Can identify vocational goals_____. Cannot identify vocational direction and goals_____. Has unrealistic vocational goals_____.
12. Exhibits appropriate behavior and reactions according to the demands of a situation_____. Behavior is inappropriate_____.
13. Works best on precise tasks which allow little deviation from the standards_____. Works best on tasks where a margin of error is allowable_____. Works best in repetitive situations where judgement and reasoning are not necessary_____.
    Works best in routine situations where some reasoning ability is necessary_____.

BACKGROUND INFORMATION

Date _____

Identifying Data

Name _____ School _____
(Last) (First)

Address _____ Tel. _____
(Street) (City) (State) (Zip)

Date of Birth _____ Age _____ Sex _____ Race _____

Family Members and Status

Name	Age	Relation	Occupation	Wages	Education	Marital Status

Source of Support

Public Assistance: OAA _____ APTD _____ GPA _____ PANB _____ AFD _____

GPAE _____ Foster Care _____ Combinations and Types _____

Time on Public Assistance _____ Caseworker _____ Tel. _____

Family Pension: Yes _____ No _____ Amount _____ Source _____

Other family income and types: _____

Education

NAME OF SCHOOL	ADDRESS	GRADE COMPLETED	COURSE	DATES	
				FROM	TO

Other training (type)_____ Dates_____

Location_____ School(s)_____

Employment History

JOB	NAME AND ADDRESS OF EMPLOYER	DATE		WEEKLY WAGE	DUTIES	REASON FOR LEAVING
		FROM	TO			

Medical History

Primary Disability or diagnosis_____

Origin or etiology_____

Date of onset_____

Secondary disability or diagnosis_____

Origin or etiology_____

Date of onset_____

Other Problems (describe)_____

HOSPITAL ADMISSIONS AND TREATMENT			
Hospital or clinic	Address	Condition treated	Dates

Family Physician_____ _____Address_____Tel.:_____

Specialist_____ ___Specialty_____Address_____

Current Medication or treatment _____

_____ _____

_____ _____

Other Pertinent Data

Medical Insurance (type)_____ _____

Skills: Typing (WPM)_____ _____Office Machine_____

Lip Reading_____ _____ Other_____

Agencies known to:_____ _____

_____ _____

Stated Vocational Goal_____ _____

Hobbies or Special Interest_____

Travel Ability: Public Transportation _____Yes _____No

Dependent on Family _____Yes _____No

Driver's License _____Yes _____No

Other_____

_____

VOCATIONAL TRYOUTS

NAME_____ SCHOOL_____ DATE_____

Please check the type of work you would like to try during the next week. You may check as many as you wish.

_____ ADDING MACHINE

_____ CARPENTRY - Using wood, tools, and following a pattern to make a sanding block, stool, and tie rack.

_____ CASHIER

_____ COSMETOLOGY - Working with hair.

_____ CUSTODIAL Cleaning the trailer

_____ DRILL PRESS - Using a ruler and drilling holes.

_____ ELECTRICITY - Connecting switches and putting wires together

_____ OFFICE FILING

_____ FLOWER ARRANGING

_____ JEWELRY - Cutting lines and pictures with a jeweler's saw.

_____ MAIL SORTING

_____ MECHANICAL - Working with locks, lawn mowers and a car engine.

_____ NURSE'S AIDE- Reading a thermometer and taking a pulse.

_____ SEWING - Making hems and an apron.

_____ STOCK CLERK - Finding items in a stockroom.

_____ SERVICE STATION ATTENDANT

_____ TYPING

What else would you like to do?_____

_____

_____

JOB INTERVIEW

NAME_____ SCHOOL_____ DATE_____

1. What type of job would you like or be interested in?
2. What jobs have you had?
3. What salary do you expect to receive for your first full time job?
4. Do you mind routine work - that is, doing the same job over and over again?
5. Do you like regular working hours (8 - 4; 9 - 5)? Would you work overtime?
6. Do you prefer working with others or alone?
7. Of all the things you do, what can you do best?
8. Are you willing to start at the bottom and work up in a new job?
9. Have you had or do you now have any serious illnesses? Are you taking medicine?
10. Do you like school? Do you want to finish?
11. What shops or other regular subjects have you had in school?
12. How do you spend your spare time? What are your hobbies?
13. Do you date?

INTERVIEW IMPRESSIONS

1. Nervous _____Yes _____No _____Somewhat
2. Appearance _____Good Fair_____ _____Poor
3. Answers in monosyllables_____ short statements_____ complete sentences_____
4. Speaks distinctly_____Yes _____No
5. Looks directly at interviewer_____Yes _____No
6. Lacks directions and goals_____Yes _____No
7. Lacks interest_____Yes _____No _____Passive and indifferent
8. Attitude toward school_____Good Fair_____ Poor_____
9. Over emphasizes money_____Yes No_____ Realistic_____
10. Interests_____Narrow _____Broad

STUDENT'S HOURLY CHART

NAME_____SCHOOL_____DATE_____

8:00 - 9:00 a.m.	Sample_____	Sample_____
	Time began_____	Time began_____
	Time stopped_____	Time stopped_____
9:00 - 10:00 a.m.	Sample_____	Sample_____
	Time began_____	Time began_____
	Time stopped_____	Time Stopped_____
10:00 - 11:00 a.m.	Sample_____	Sample_____
	Time began_____	Time began_____
	Time stopped_____	Time stopped_____
11:00 - 12 noon	Sample_____	Sample_____
	Time began_____	Time began_____
	Time stopped_____	Time stopped_____
12:00 - 1:00 p.m.	Sample_____	Sample_____
	Time began_____	Time began_____
	Time stopped_____	Time stopped_____
1:00 - 2:00 p.m.	Sample_____	Sample_____
	Time began_____	Time began_____
	Time stopped_____	Time stopped_____
2:00 - Dismissal	Sample_____	Sample_____
	Time began_____	Time began_____
	Time stopped_____	Time stopped_____

REMARKS:

MOBILE UNIT FOR VOCATIONAL EVALUATION
BOARD OF EDUCATION OF BALTIMORE COUNTY
TOWSON, MARYLAND 21204

NAME: JONES, Mary
BIRTHDATE: 9-17-55
SCHOOL: South County Senior High

Evaluation Period: 3-23-72
through: 3-30-72

BACKGROUND INFORMATION:

At the present time, Mary resides with her father, mother, brother, and one sister. Her father is employed as a truck driver and her mother is a school bus driver. Both siblings are currently in school. Neither of her parents completed their high school education. There are no other financial resources available to the family and the father is the primary source of support. Mary states there are no significant home problems.

Concerning her medical background, Mary's records indicate that she has a history of scoliosis, or a curvature of the spine as it is commonly known. She has a gym excuse and indicated that she cannot engage in bending, lifting, and other heavy activities. She said that she can stand or sit for long periods of time without difficulty. However, no orthopedic information has been received regarding her condition at this time. Contact with the Board of Education of Baltimore County Pupil Services indicates this youngster is not known to them. Mary also stated that she needs glasses. She has had an eye examination recently and will receive her glasses as soon as possible. She had a back operation at Children's Hospital approximately nine years ago but she does not recall the exact date. She is currently under the care of Dr. E. J. McDonnell, orthopedist. She states that she wears a brace on her back. It would be helpful to obtain further medical information from Dr. McDonnell to determine the exact restrictions relative to competitive employment. Completion of a D.V. R. orthopedic form would be of value to the D.V.R. counselor.

Mary indicated that she has been employed as a counter girl at a Rexall Drug Store. She left several weeks ago and does not know if she will return. The reasons for her termination are not clear at the present time.

Mary attended School #33 - Armistead Elementary School through the sixth grade and then went to Herring Run and Middle Junior High Schools. She is currently attending South County Senior High School, Special Education Class.

Mary has no stated vocational goals at this time and her special interests are swimming, sewing, and tennis. On her vocational tryout sheet, she stated she was interested in the adding machine, cash register, cosmetology, office filing and nurse's aide work samples.

In a simulated job interview, Mary presented herself well. She was responsive, interested, and answered questions in complete statements. She does need to look more directly at the interviewer and relax more.

STANDARDIZED TESTS:

I. On the Picture Interest Inventory, a non-verbal measure of individual

interests, Mary's most significant scores at the higher level; i.e., at the 70th percentile or greater, were in the interpersonal, business, esthetic, and computational areas. Her most significant scores at the lower level; i.e., at the 30th percentile or lower, were in the mechanical, scientific, and natural occupations. Her time perspective score indicates she would not be interested in a long term training program in which she would have to forego immediate rewards for future gain.

II. On the Purdue Pegboard, a measure of manipulative dexterity, this student demonstrated an above average aptitude in this area.

III. Testing on the Crawford Small Parts Dexterity Test, a measure of fine eye-hand coordination, shows this student possesses superior aptitude in using small tools and in working in situations requiring well coordinated, fine eye-hand movements.

IV. On the Revised Beta Examination, a non-verbal measure of intelligence, Mary is currently functioning in the below average range of intelligence (80-89) according to this particular test classification.

WORK SAMPLE RESULTS:

Basic Skills Mary can satisfactorily perform basic addition and subtraction tasks but experienced problems when multiplying and dividing. She can handle the fundamental concepts of change making and can count satisfactorily. However, she could not complete a job application satisfactorily. She knows most of her basic colors including shades but cannot measure with a standard ruler. On a lettering task which measures her ability to organize, plan, copy and use simple tools, she was given a below average rating. She can tell time well.

Work Samples On a standardized TOWER System adding machine evaluation, Mary received an average rating for quality of performance and an above average score for production speed. This evaluation measures the student's ability to pay close attention to detail, to work with and make entries of small and precisely formed figures within limited and specified spaces, to handle multiple digit numbers and to operate a standard adding machine.

A job tryout on the cash register evaluation in which Mary had to operate a standard cash register, compute the cost of a food order with the aid of a price splitting chart and a standard sales tax chart, discriminate between taxable and non-taxable items, and make correct change indicates she performed in an unsatisfactory manner in terms of accuracy. She obtained an average rating for work speed. No improvement was noted on a retrial.

An assessment of alphabetical, chronological, and code filing evaluations in which Mary had to file a total of 900 3" x 5" index cards resulted in an above average rating on alphabetical filing, an average score on the chronological task and an average score on the code sample. Her score for work speed was average on all three types. This sample measures one's visual acuity, eye-hand coordination, functional reading, accuracy and tolerance for detailed work.

An important part of the clerical evaluation is the sales book work sample which

is part of the TOWER System. This evaluation measures the student's ability to make out multiple copy sales slips. It assesses her capacity to select information pertinent to the task at hand, to work with detailed information, to record that information neatly and accurately and to compute correctly the amount of sales tax and finally, the sum total of the bill. She received a below average rating on the first trial. However, on a retrial she was able to improve her score to average.

A tryout on the departmental and zip code mail sorting evaluations resulted in superior scores with above average scores for production speed.

Mary tried the duplicator work sample in which she had to operate an Astro-Dial 500 duplicator and make multiple copies. She obtained an above average rating.

Concerning the typing evaluation which is designed to determine a person's potential to learn touch typing, eye-hand coordination and dexterity, Mary was given an average rating. She shows potential for further training in this area. Her coordination was excellent as was her rhythm.

Due to her interest, Mary was given an opportunity to work on the cosmetology work sample. In the first phase, she was instructed to select and produce a particular hair style following a printed diagram. Her technique, dexterity, eye-hand coordination, and ability to follow a diagram accurately were above average. She was then asked to create her own individual hair style. She was also given an above average rating for the final product.

On a standardized TOWER System wire sorting evaluation which measures one's aptitude in recognizing and identifying colors as they are used in the marking of circuits in the electronics industry, she obtained a superior rating. She worked with solid and two-color wires. She then explored a TOWER System electronics assembly task in which she had to run a small cable harness of 10 solid color wires following a diagram. She obtained a superior rating on this also. She showed excellent potential in this area and needed very little instruction. On a soldering task in which Mary had to solder 24 wires to terminal plugs, she obtained an average rating.

An exploration of work samples relating to the sewing area indicate that Mary possesses average eye-hand-foot coordination and that she is capable of being trained further on an industrial type machine. One has to satisfactorily make a hem, pillow case, an apron, and use scissors properly in order to be recommended for this occupation.

BEHAVIORAL OBSERVATIONS:

Vocational Strengths Mary demonstrated excellent work habits during this session. She was a very competent worker, was highly cooperative, dependable, and was very flexible. She would try new tasks and was willing to explore new areas. She followed verbal instructions well. Her frustration and work tolerance levels were above average. She worked independently and needed almost no supervision. She initiated her own work and would ask for additional duties. She persevered and the quality of her work was at least average, and in many areas,

above average. She asked questions if she encountered difficulty and she was able to reason well. Her work attitude was above average and her work did improve with experience. Her work speed was above average. She gets along well with others and was able to relate to her peer group and to authority figures.

Vocational Weaknesses Mary does tend to rush and was overly concerned about doing the task as quickly as she could rather than being concerned with accuracy. She needs to learn to pace herself and this should improve through further training. She also needs to learn how to organize her work better and she will need a great deal of structure and direction.

SUMMARY AND RECOMMENDATIONS:

A review of all pertinent psychometric data, behavioral observations, work characteristics and work sample results indicate Mary is capable of competitive employment in a routine capacity in the lower level positions in clerical, service, and assembly and packing positions. Mary demonstrated an average aptitude for both areas and is mainly interested in working with others. However, a final decision regarding any placement should not be made until further clarification is obtained regarding her physical limitations.

The following is recommended for her:

1. Orthopedic evaluation.

2. Vocational counseling to help her crystallize her vocational goals. Occupational information would be of value.

3. In-school work experiences in the nurse's office, library, or cafeteria.

4. Community centered work experiences in her senior year, An earlier placement could be considered if one is available at an earlier date.

5. Remediation for vocabulary, multiplication and division skills, completing a job application, spelling, measuring and organizing and planning her work. Training in office practices and typing would be helpful.

6. Individualized vocational training via visual demonstration techniques in sn spptopriate area. Training at Dundalk Vocational-Technical Center can be considered for her.

The following occupations can be considered for her at an entry level after graduation from high school:

Clerical

file clerk
duplicator machine operator
copy typist
stock clerk
coding clerk
mail clerk
mail clerk
library assistant
information clerk
office girl
collator operator
mailer (print. & Pub.)
key punch operator (if her speed can be increased to 40 words per minute)

(Continued)

Bench Work

T. V. tube tester
lamp wirer
speaker mounter
printed circuit assembler
solderer
power sewing machine operator
seamstress

Service

Various food service placements such as fry cook, kitchen helper, etc.
nurse's aide (selective placement)
shampoo girl
wig stylist.

Sheldon S. Meyers, Vocational Evaluator

SSM:ejh

CC: South County Senior High School
Supervisor, Special Education
Job Development Coordinator
Counselor, Division of Vocational Rehabilitation
File (2)

A one-year and a two-year follow up indicated that the students received some service that would enable them to become functional and independent. The survey also indicated the degree to which implementation of recommendations occurred. The duration of the project, being three years, did not provide for any student to graduate and become employed. Therefore, the one year and two year follow up shows the progression of the first and second group of evaluees as they were served in the 11th and 12th grades.

FIRST YEAR			SECOND YEAR	
Question *	Yes	No	Yes	No
1	51%	49%	41%	59%
2	20%	80	46%	54%
3	22%	78%	27%	73%
4	46%	54%	27%	73%
5	89%	11%	82%	18%
6	92%	8%	81%	19%
7	9%	91%	23%	77%
8	13%	87%	14%	86%
9	15%	85%	14%	86%
10	9%	91%	2%	98%
11	34%	66%	39%	61%

*Refers to Questions on next page

MOBILE UNIT FOR VOCATIONAL EVALUATION
BOARD OF EDUCATION OF BALTIMORE COUNTY
TOWSON, MARYLAND 21204

FOLLOW-UP OF STUDENT SERVICES

STUDENT'S NAME_____ BIRTHDATE_____

SCHOOL_____ THIS DATE_____

YES NO

_____ _____ 1. Has the student been involved in an in-school work experience?

If yes, please specify type of program.

_____

_____ _____ 2. Has the student been involved in a community centered work experience?

If yes, please specify type of program.

_____

_____ _____ 3. Has the student been involved in a vocational training program?

If yes, please specify the type of program.

_____

_____ _____ 4. Has the student been employed in a full-time or part-time job during the past year?

If so, please specify the type(s) of job(s).

_____

_____ _____ 5. Has the student received additional instruction in basic educational skills; i.e., making change, use of measurements, use of public transportation, spelling, following directions, etc.

If yes, please specify the type(s) of instructior.

_____

YES NO

6. Has the student been involved in any other subjects within the regular school curriculum; i.e., typing, office practices, etc.

   If yes, specify the subjects.

   _____

7. Has the student been involved in an individualized personal or work adjustment program during the past year?

   If so, please specify the type(s) of program(s).

   _____

8. Have any medical services been provided to the student during the past year other than those normally provided by the school?

   If yes, please specify the type(s) of service(s).

   _____

9. Has the student received any social services during the past year; i.e., family counseling, referral to welfare, etc.?

   If yes, please specify the type(s) of service(s).

   _____

10. Has the student received any services of a psychological nature; i.e., testing, therapy, etc. during the past year?

    If yes, please specify the type(s) of service(s).

    _____

11. Has the student been involved in continuous sessions of personal or vocational counseling?

    If yes, please specify the purpose.

    _____

12. How can the school improve its educational program for this student?

    _____

    _____

    _____

At the conclusion of the project, 48 of the 330 students vocationally evaluated, were no longer in school.

Voluntarily quit	34
Employed	7
Moved from the area	5
Transferred to other districts	2

As a follow-up of the three-year federally funded project, "A Mobile Unit to Provide Vocational Evaluation for Handicapped Students in Baltimore County", a survey questionnaire was prepared and sent to those professionals who were closely involved with the population that was evaluated. The professional group included classroom teachers, guidance counselors, school nurses, school administrators, pupil personnel workers, psychologists, job development coordinators and counselors from the Division of Vocational Evaluation. Its purpose was to allow those who were working directly with the evaluee to provide feedback that would enable the staff to better serve them and the students.

Question *	Teachers	Guidance Counselors	School Nurses	Administ.	Ancillary Services	TOTAL
1. YES	12	14	8	6	13	53
NO	1	0	0	0	0	1
2. YES	13	13	6	6	12	50
NO	0	0	2	0	0	2
3. YES	10	10	8	5	12	45
NO	2	0	2	1	0	5
5. YES	13	11	10	5	12	51
NO	1	0	1	1	0	3
6. YES	13	11	9	5	11	49
NO	0	0	0	1	1	2
8. YES	10	11	10	5	11	47
NO	1	0	0	2	0	3
9. YES	8	10	9	6	11	44
NO	3	1	2	2	0	8

* Refers to questions on next page.

FROM: William T. Dixon DATE: January 24, 1973

TO:

RE: VOCATIONAL EVALUATION SERVICES

During the past three years, the Mobile Unit for Vocational Evaluation has been providing service to 10th grade students in the special classes for the intellectually limited.

We, the staff of the Mobile Unit for Vocational Evaluation, would appreciate your comments on the services offered; the report, format and content, and on the recommendations resulting from the report and the discussion at the conference.

This request is made in the hope that the service is valuable to you, and by telling us how we might improve the service or the report, we will be able to direct our efforts toward more adequately fulfilling your needs.

Please take a few minutes of your time and complete the enclosed questionnaire and return it to my office. We would like to incorporate your suggestions into our planning for the coming school year.

Thank you for your promptness and cooperation.

William T. Dixon
Assistant Project Director
Mobile Unit for Vocational Evaluation
Office of Special Education - Greenwood

WTD:ejh

Enclosure

BOARD OF EDUCATION OF BALTIMORE COUNTY
MOBILE UNIT FOR VOCATIONAL EVALUATION
TOWSON, MARYLAND 21204

VOCATIONAL EVALUATION SERVICES

_____
(Please state your professional capacity.)

YES	NO	
___	___	1. Do you find the service of vocational evaluation beneficial?
___	___	2. Is vocational evaluation helpful to you in your professional capacity?
___	___	3. Do you think the service is helpful and meaningful to the student?
		4. What could be done to make the service of vocational evaluation more helpful to you or to the student? (Please comment below.)

_____

_____

_____

_____

_____

_____

___	___	5. Is the format of the report helpful to you?
___	___	6. Is the language of the report meaningful and understandable ? (Please comment below if you wish.)

_____

_____

_____

YES NO

7. What changes would you like to see in the report? (Please comment below.)

_____

_____

_____

_____

_____

___ ___ 8. Are the recommendations realistic and appropriate?

___ ___ 9. Can you, in your professinnal capacity, implement those recommendations that are within your area of responsibility?

10. What information would you like to see in the report that is not included now. (Please comment below.)

_____

_____

_____

_____

_____

_____

_____

_____

BC 10 904 -73
( )

SUPERVISORS RATINGS OF SPECIAL EDUCATION STUDENTS
IN COMMUNITY CENTERED WORK EXPERIENCE PROGRAM

Supervisors' Evaluation Report forms were sent to all cooperating employers and trainers. The purpose of this summary report is to help the teacher and pupil better understand the performance of students in the overall program of Community-centered Work Experience.

The accompanying chart lists the six evaluation categories and the number of responses on a 5-point rating scale for each. Five points are given for "Excellent"; four for "Very Good"; three for "Satisfactory"; two for "Fair"; and one for "Poor".

N = the total number of pupils rated in each category.

X is the mean score or erage score for each category overall.

The highest average is found in the category of Dependability. The lowest average is in the category of Initiative. All other categories are in the satisfactory range.

SUPERVISORS' RATINGS OF SPECIAL EDUCATION STUDENTS

FIRST TERM 1972

Evaluation Category	RATING SCALE Excellent 5	Very Good 4	Satis. 3	Fair 2	Poor 1	N	X
Job Knowledge	5	9	10	4	1	29	3.4
Quantity of Work	4	8	10	5	2	29	3.2
Quality of Work	3	10	8	6	2	29	3.2
Job Attitude	6	11	7	4	1	29	3.6
Initiative	2	5	12	5	4	28 *	2.8
Dependability	14	7	6	1	1	29	4.1

The total number of supervisors was 29 but one did not mark "Initiative", accounting for an "N" of 28 and 29.

SUPERVISORS' RATINGS OF SPECIAL EDUCATION STUDENTS

SECOND TERM 1972

Evaluation Category	RATING SCALE Excellent 5	Very Good 4	Satis. 3	Fair 2	Poor 1	N	X
Job Knowledge	3	21	29	12	2	67	3.2
Quantity of Work	4	26	25	9	3	67	3.2
Quality of Work	4	23	26	11	3	67	3.2
Job Attitude	9	21	25	8	4	67	3.3
Initiative	8	10	22	16	11	67	2.8
Dependability	21	24	15	5	2	67	3.9

THIRD TERM 1973

Evaluation Category	RATING SCALE Excellent 5	Very Good 4	Satis. 3	Fair 2	Poor 1	N	X
Job Knowledge	10	17	21	11	0	59	3.4
Quantity of Work	12	19	19	6	3	59	3.5
Quality of Work	9	18	20	9	3	59	3.4
Job Attitude	15	21	15	5	4	59	3.6
Initiative	10	10	22	11	6	59	3.1
Dependability	28	15	10	4	2	59	4.0

Supervisor's Evaluation Report

Student Employee:_____ Evaluation Period Covered:_____

Employer:_____ Coordinator:_____

Address:_____ Address:_____

Zip Code:_____ Phone:_____ Zip Code_____ Phone_____

Circle one rating for each category:

JOB KNOWLEDGE — The employee's basic understanding of the techniques and procedures relating to his job.

Excellent Very Good Satisfactory Fair Poor

QUANTITY OF WORK — The amount of work an individual does in a work day.

Excellent Very Good Satisfactory Fair Poor

QUALITY OF WORK — How well the work is done.

Excellent Very Good Satisfactory Fair Poor

JOB ATTITUDE — The amount of interest and enthusiasm shown toward his work, his co-workers, and the company rules and regulations.

Excellent Very Good Satisfactory Fair Poor

INITIATIVE — The amount of self-direction he uses in performing all the responsibilities of the job.

Excellent Very Good Satisfactory Fair Poor

DEPENDABILITY — Faithfulness in coming to work daily and conforming to work hours.

Excellent Very Good Satisfactory Fair Poor

Check the area below in which you feel the employee could use further instructions:

Personal appearance_____ Meeting the public_____ Courtesy_____

Use of language_____ Vocational planning_____ Safety_____

Other (Describe)

_____

Overall Evaluation :_____

Conference Desired: Yes___ No___ Signature of Supervisor_____